

# American Research Center in Egypt , Inc.

## NEWSLETTER



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NUMBER 105

SUMMER 1978

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40 Witherspoon Street  
Princeton, New Jersey 08540  
United States of America

2, Midan Qasr el Dubbarah  
Garden City, Cairo  
Arab Republic of Egypt



AMERICAN RESEARCH CENTER IN EGYPT  
INCORPORATED

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Linda Pappas Funsch  
Editor

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# ARCE NEWS

## 1979 Annual Meeting: Preliminary Announcement

The next Annual Meeting of the ARCE will be hosted by the University Museum, University of Pennsylvania, in Philadelphia. The dates will be April 27, 28, and 29, 1979.

Further details will appear in subsequent issues of the NEWSLETTER.

## Fellowship Application Deadline Approaches

All applications and letters of recommendation for 1979-80 fellowships must be received by the Princeton office no later than November 30, 1978. Award funds are available for dissertation students and post-doctoral scholars in the fields of archeology, art history, the humanities, and social sciences.

## NEWS FROM CAIRO

### Telex Service Begins

We are pleased to report that the Cairo Center now has access to a telex facility. Anyone wishing to contact that office by telex should address the message to: 93673 NOIS UN ATTN: ARCE.

Alternately, one may continue to cable AMARCH CAIRO.

## Antiquities Organization of Egypt: Update

July, 1978

What follows is a partial listing of new appointments at the Antiquities Organization:

Shehata Adam	President
Victor Girgis	Director General
Ahmed Mohammed Yusef	Director, Documentation Center
Ahmed Qadry	Director, Arts Organization
Hassan el-Ashiry	Director, Cairo Museum
Ibrahim el-Nawawy	Associate Curator, Cairo Museum
Mohammed Saleh	Associate Curator, Cairo Museum
Dia Abu Ghazi	Director of Museums and Director, Cairo Museum Library

COLLÈGE DE FRANCE  
Cabinet d'Égyptologie

Inventaire B 10.495.....



# Adjunct Egyptian Professors

During the 1977-78 year, the Cairo Center of the ARCE broadened its attempts to enlist the advice and collaboration of a greater number of Egyptian scholars. This effort was aimed at fostering greater contact with those professors and students in local universities whose own research and teaching parallel that of visiting Fellows. Much of the effort of Egyptian colleagues, often in nearly the same fields, has been ignored by American and Canadian scholars because no means exists to bridge the simple social gap separating institutions. Also, because Egyptian researchers work year in and year out with local libraries, archives, ministries and other cultural institutions, they best can provide desperately needed advice and introductions.

To remedy these problems, the ARCE asked the Bureau of Educational and Cultural Affairs of the U.S. State Department (now subsumed under the International Communication Agency) to fund a modest series of Adjunct Egyptian professorships. Accordingly, in the course of the past nine months, the officers of the Center selected four individuals from among the many distinguished scholars working in several Egyptian universities. All seemed to offer rich and varied possibilities for stimulating new contacts and for highly professional advice. Their qualifications, obvious from the brief resumes which follow, rank them clearly outstanding by all standards.

## Hossam M. Issa

The doctoral dissertation of Hossam M. Issa, Assistant Professor in the Faculty of Law, Ain Shams University, is only one of his distinguished publications. The dissertation, Capitalisme et sociétés anonymes en Egypte (1970, 531 pp.), submitted to the University of Paris in 1969, won the thesis prize of the Institute of Compared Law, Paris, in 1970 and was published in the same year.

Professor Issa's other important publications include "Multinational Corporations, a study of legal aspects of capitalist concentration" (1977), and "Droit public et droit privé" (1976), both in the Revue de Sciences Juridiques et Economiques, L'Islam comme facteur politique en Egypte (1972), "Les Courants idéologiques Arabes contemporains face à la défaite de 1967" (1972), EPALMO; and "Les Nouveaux Natis," an analysis of the Egyptian new class (1968) in Démocratie Nouvelle.

In addition to his Ph.D. from the University of Paris, Professor Issa holds a D.E.S. in private law (1962) from the University of Grenoble, France; a D.E.S. in public law (1959) and a Licence en Droit (1958) from the Faculty of Law, Cairo University.

Professor Issa has held his present position at Ain Shams University since 1976. He spent 1972-74 at L'Université Catholique de Louvain as Visiting Professor in L'Institut des Pays en Développement, and from 1970 to 1972 he was Chargé de Cours at Ain Shams University. From 1960-1970 he was Assistant and Chargé de Cours at the University of Assiut.

## Mounir Hanna Megally

Mounir Hanna Megally, Assistant Professor of Egyptology at Cairo University, has published extensively in French, Arabic, and English. His French books, all in second editions, are Recherches sur l'économie et l'administration d'après le papyrus hiéroglyphique comptable E. 3226 du Louvre (1977), Notions de Comptabilité (1977), Considérations sur les variations et la transformation des signes hiéroglyphiques (1972), both discussing the same Louvre papyrus, and Le papyrus hiéroglyphique comptable E. 3226 du Louvre (1971). His eight articles in French discuss accounting systems and various aspects of administration in ancient Egypt.

In Arabic, Professor Megally has published one series of articles on literature and another on religious thought in ancient Egypt, as well as two books, Extracts from Ancient Egyptian Literature (1972) and The Position and Function of the Scribe in the Old Kingdom (1955). His English work includes a two-year, weekly program for Cairo radio, which will soon be published in book form, and two books, Hieroglyphic Palaeography and Its Role in Egyptian Art and Archaeology (in press), and Semitic Elements in the Hieratic Text of the British Museum Tablet 5647b from the New Kingdom (in preparation). Professor Megally is also a respected book reviewer in French and Arabic.

Before going to Cairo University in 1972, Professor Megally was Lecturer at Assiut University (1969-1971), and he spent 1960-1969 on a mission to France for Assiut University. His previous positions were: Head of the Scientific Section, Center of Documentation of Ancient Egypt, Cairo (1956-1960); Inspector of Excavations for the Department of Antiquities (1955-1956); and Assistant, Department of Egyptology, Alexandria University (1951-1955).

Professor Megally received his B.A. (1951) and M.A. (1955) from Alexandria University and a Doctorat d'Etat in Egyptology in France in 1969.



### Ahmed Aly Morsy

Professor Ahmed Aly Morsy's chief interest is the folklore of Egypt, both music and oral literature. His doctoral thesis, submitted to the Arabic Department of the Faculty of Arts, Cairo University, in 1969, is titled "Oral Literature, A Field-work Study in El-Fayoum District," and his M.A. thesis (1966) is "The Folksong, A Field-work Study in Borollos District."

From his graduation (1963) until the present, Professor Morsy has taught in the Arabic Department of Cairo University, where he is now Associate Professor. He did, however, spend 1975-76 teaching at Harvard. In addition, Professor Morsy has been chief editor of the magazine Folk Arts, published by the Egyptian Ministry of Culture since 1965.

Professor Morsy has both written and translated into Arabic works about folklore. His books, all in Arabic, are Folk Song (1970), Studies in Folklore (with others, 1973), and Introduction to Folklore (1975). He has translated into Arabic Folksong and the Music of Folksong, by George Harzog, and Myth, Legend and Folktale from Sir G.L. Gomme's Folklore as an Historical Science. Professor Morsy has published numerous articles in Folk Arts and in Alam Al-Fikr and Music Magazine (Cairo), as well as 15 book reviews.

### Hassanein M. Rabie

The interests of Hassanein M. Rabie, Associate Professor of History at Cairo University, range from medieval financial systems to the training of Mamluk Faris. His published books include al-Nuzum al-māliyya fī Miṣr Zaman al-Ayyūbiyyīn (The Financial System in Egypt at the Time of the Ayyubiyyin, published in 1964), The Financial System of Egypt A.H. 564-741/ A.D. 1169-1341 (volume 25 of the London Oriental Series, 1971) and Fifty Documents in Medieval History (1971). His articles to date deal with financial and military subjects and with Baybars I in an Encyclopaedia Britannica (new edition) article, and Kalawun, in an article for the Encyclopaedia of Islam (new edition). Professor Rabie has also edited two volumes of Ibn Wāsil: Mufarrij Al-Kurūb fī Akhbār Banī Ayyūb (History of the Ayyubids).

Professor Rabie has studied and taught in Egypt, England, and America, though he has been based at Cairo University since 1961. In 1973-74, he left Cairo briefly to be Visiting Assistant Professor at the Middle East Institute of Columbia University and in 1974 he held the same position in the Department of Near Eastern Studies of Princeton University. In addition to his works at Cairo University, Professor Rabie taught part-time at the American University in Cairo from 1971-73. From 1969 to 1973 he was a member of the Center for Editing and Publishing Arabic Manuscripts of the National Library of Egypt.

Professor Rabie completed his M.A. in history at Cairo University in 1964 and his Ph.D. at the School of Oriental and African Studies of the University of London in 1969. He holds a B.A. in history from the Faculty of Arts of Cairo University (1959) and a Diploma in Education from Ain Shams University (1960).

## مركز البحوث المصرية بمصر

### NEWS OF OTHER ASSOCIATIONS

#### International Association of Egyptologists

At the First International Congress of Egyptology held in Cairo, October 2-10, 1976, the International Association of Egyptologists was reorganized and provisional articles were adopted. The Second International Congress of Egyptology is to be held in Grenoble (France) in the second part of September, 1979.

The general scope of the Association is to promote the study of Egyptology in all its aspects and different projects to this effect are under discussion.

Those who wish to join the Association are invited to address themselves to the President (Torgny Säve-Söderbergh, Gustavianum, S-752 20 Uppsala, Sweden) or the Secretary (Jean LeClant, Centre de Recherches Egyptologiques de la Sorbonne, 1 Rue Victor-Cousin, F-75005 Paris, France).

There is no annual subscription but to cover some of the initial costs of the Secretariat an enrolment fee of the equivalent of U.S. \$10.00 (for students U.S. \$5.00) is payable by bank or post cheque to the Secretary, J. LeClant (C.C.P. 5319-43 Paris) until a special account of the Association has been opened.



Meetings and Conferences

The Thirty-second Annual Conference  
of the  
MIDDLE EAST INSTITUTE  
in conjunction with  
THE JOHNS HOPKINS UNIVERSITY  
SCHOOL OF ADVANCED INTERNATIONAL STUDIES  
September 29-30, 1978  
at the Mayflower Hotel  
Washington, D.C.

The Middle East Institute  
1761 N Street, N.W.  
Washington, D.C. 20036

The Twelfth Annual Meeting  
of the  
MIDDLE EAST STUDIES ASSOCIATION  
November 8-11, 1978  
at the University of Michigan  
Ann Arbor, Michigan

The Middle East Studies  
Association  
Hagop Kevorkian Center for  
Near Eastern Studies  
50 Washington Square South  
New York, New York 10003

The Eightieth General Meeting  
of the  
ARCHEOLOGICAL INSTITUTE OF AMERICA  
December 28-30, 1978  
at the Hotel Vancouver  
Vancouver, British Columbia

The Archeological Institute  
of America  
260 West Broadway  
New York, New York 10013

MIDDLE EAST SOCIAL SCIENCES INDEX

Social science scholars working in Cairo have at their disposal a little-known resource, a card catalogue index of publications dealing with the social sciences in the Middle East from 1948 to 1975. In 1979, the index will be available in four volumes for about \$100, published jointly by the American University in Cairo Press and another, as yet undetermined, publisher. The following is Editor Richard H. Dewey's description of the work:

MIDDLE EAST SOCIAL SCIENCES INDEX, 1948-1975

Richard H. Dewey, Editor  
American University in Cairo Library

Scope

A bibliography of journal articles and chapters from books on the contemporary Middle East, published 1948-1975.

The contemporary Middle East is defined as including all Arab states, Cyprus, Iran, Israel and Turkey.

Publications listed include only those about this period. Historical studies are indexed in standard bibliographies such as *Index Islamicus* and *Abstracta Islamica*. Islam, Judaism and Christianity and the national languages are included only if the publication is written in the contemporary social context.

While the majority of the publications are in western languages, there are numerous others included in translation from Arabic, Hebrew, Russian and Turkish.

The *Index* is unique. There are numerous specialized bibliographies on the Middle East as well as general ones in areas such as economics which include sections on the Middle East. These bibliographies are always selective. There is nothing currently available that includes a complete compilation of articles and book chapters incorporating all of the social sciences.

Arrangement

The index, currently on cards, is arranged in four general categories:

1. Arab-Israeli Conflict
2. Economics
3. Politics
4. Social Conditions (This includes education, anthropology, population studies, women, etc.)



Each of the categories would be published as one volume, making a set of four. The Index of all authors would be appended to the Social Conditions volume as it will be the smaller of the four.

Within each of the four categories, entries (cards) are arranged by subject. Subjects selected are those commonly found in bibliographies and commercial periodical indexes. The subject may stand alone or it may be sub-divided by country.

Education or Education - Egypt

Entries for countries are treated likewise.

Egypt or Egypt - Elections

There are some 400 subjects and 150 cross-references.

The entries are arranged chronologically within each subject by year and then alphabetically within each year. Therefore, the index can be used by the beginning student searching for all publications on a specific subject as well as by the scholar interested in only the most current information.

There are approximately 65,000 author entries, of which some 10,000 are articles with no author as they appear in news magazines. The majority of the entries have been assigned one subject or, at most, three. This will generate about 70,000 subject entries.

#### Sources

In addition to the standard periodical indexes some 100 bibliographies have been consulted. These bibliographies will be appended to the final publication. Countless bibliographies appended to book chapters and articles have also been used.

In order to include book chapters not otherwise included in bibliographies, the social science collections at the libraries of the American University in Cairo and the American University of Beirut have been consulted. Materials were also located in research institutes in Cairo and Beirut.

مركز البحوث الإسلامية بمصر

## LIFE AND PERIOD OF SHAYKH IBRAHIM AL-BAJURI

Peter Gran  
University of Texas at Austin  
ARCE Fellow, 1978

The principal objective which I set for myself was to construct the life of a Shaykh al-Azhar, Ibrahim al-Bajuri, as a way into the study of Egyptian cultural history between 1835 and 1865. Studying the writings of a Shaykh al-Azhar is a way of establishing one pole of religious and secular thought close to state policy in an otherwise unknown period. Thus, I attempted to locate the twenty principal writings of al-Bajuri and to gather the available biographical information on him. During this process, it became clear to me that al-Bajuri composed all his books during the early part of his life, that is up to 1838, and that, therefore, these works could not in any sense be taken to reflect the later period when he became Shaykh al-Azhar, that is from 1847 to the early 1860s.

In the course of searching through the manuscript catalogues of al-Azhar for al-Bajuri's writings, I also found a fairly large number of other writings original to this period as well and spread out over the whole interval leading up to the rebirth of reform in the Age of Isma'il. Two figures of apparently great prominence at that time were a writer, 'Abd al-Hadi al-Abyari, and a theologian, Hasan Hamzawi al-'Idwi. Today they exist only in the indices of Kahhala and al-Zirikli, being otherwise unknown. In all, I estimate several hundred works were composed. These works should be taken cognizance of in future historical studies of Egypt as they far more than the isolated works of al-Tahtawi are the raw material for a cultural history of Egypt.

The religious writings of the period 1835 - 1865 appear to mark a phase in the development of theological writing which distinguishes them from the 18th century and those of the Muhammad 'Ali period. They did not engage their contemporaries or predecessors in dialogue with nearly the directness or vindictiveness as those of the past, e.g., those of Shaykh Hasan al-'Attar, d. 1835. Thus, it may be possible to conceive of al-Bajuri's development as a somewhat linear evolution in which the smaller Risa'il with which he began his career actually lead to the major two volume work in fiqh with which he ended. As this type of analysis would not contribute to social history, I spent the end of the summer trying to identify pietistic writings of regions in opposition to the modern state formation of Egypt.

In doing this, I acknowledge my debt to Samir Amin's Arab Nation (Zed, 1977) where the writer postulates that state formation in the modern period disrupted the commercial network of the premodern Arab world, but left the outlying regions in the hands of tribes with long experience in struggle and a global vision of economics.

While it is not necessary to fully develop a picture of the culture of the Yemen, Barqa or Sudan, some important samples must be found to contrast the epistemology and ideas of the Azhar in a broader context.



ASPECTS OF URBAN KINSHIP:  
A REPORT ON WORK IN PROGRESS

Daniel G. Bates  
City University of New York  
(Hunter College)  
ARCE Fellow, 1978

Dr. Amal Rassam of Queens College of the City University of New York and I are presently engaged in a pilot study of urban kinship and family organization in Cairo. This work is supported by a joint fellowship from the ARCE. At this juncture, I have completed approximately half of the summer phase of the project. Dr. Rassam will arrive in Egypt in January to complete the field work. Thus, the project is less than a third completed and what follows is a statement of objectives, research strategies, and preliminary impressions.

The social and economic importance of familial and kin relations in non-industrial and industrial societies is generally acknowledged. At the same time, relatively little research has been carried out on the nature of family and kin organization in urban areas of the Middle East, particularly among the segment of society which might be termed "middle class." Our investigation is conceived in terms of three interrelated domains of kinship activity among middle class families: how do people conceptualize their familial or kinship system; how do they develop a network of relationships defined in the idiom of kinship, and; how do they make active use of such networks.

We have selected Cairo for this study for a number of reasons. Cairo is a city of central importance in the Middle East, has a large "middle class" and, most importantly, has been the subject of a number of good sociological studies on which we can build. We are concentrating on rural migrants to the city in an effort to narrow the scope of the project and to observe more systematically how people employ kin relationships to practical ends. One often thinks of rural migrants as poor, illiterate, and forced by economic necessity of leave their natal villages. This is, of course, the case with the majority of migrants of Cairo in this generation. However, what is overlooked is that Cairo, like other major cities in the Middle East, continually attracts village-born migrants who, because of their education and resources, establish small businesses or find urban employment in government, education, or commerce. These people frequently maintain ties with their villages and make considerable use of familial ties in deciding to migrate to the city, finding employment, locating housing, etc. A sizable portion of the expanding urban middle class appears to have rural roots.

The first weeks of the project have been devoted primarily to making contact with Egyptian scholars working in Cairo and collecting reports and available bibliographic materials. I would like to mention in this regard that Dr. Nawal Nedim of the Social Research Center of the American University in Cairo, who is conducting a large-scale study of aging and the care of the aged in Cairo, has been extremely helpful. The National Center for Social and Criminological Research has made available the preliminary results of a major study of urban settlement and relocation which is still underway. This study is a valuable source of base-line data about urban workers, their housing, incomes, and family characteristics. A further source of useful bibliography which should be noted is the new Middle East Social Science Index, prepared by Dr. Richard Dewey at the American University in Cairo. This comprehensive card index of recent publications in the social sciences has proved a very valuable (and largely unknown) research aid.\*

More recently, I have engaged a research assistant with a degree in sociology and have developed a preliminary set of questions around which we are structuring interviews. At this stage in the study we will not attempt to develop a sample, but will rely on biographical histories which we are collecting in an informal atmosphere. I am devoting considerable attention at this point to the initial problems faced by rural migrants in finding housing and employment. Dr. Rassam will spend a great deal of time with selected families when she arrives in January, and at a later point we may draw a broader sample. At the moment, I am working with families living in a neighborhood of Giza who have come, for the most part, from Minya.

At this juncture in the project it would be inappropriate to describe the nature of middle class adaptation to urban life. I can note that Janet Abu Lughod's earlier observation, that the majority of "lower class" Cairenes tend to maintain rural ties and to participate in both rural and urban communities seems to be true for better educated migrants as well.

This project is a pilot study. We may wish to continue the research on a broader scale if results warrant this. In any event, we intend to publish some of the data being collected now in a book which we are presently writing on the anthropology of the Middle East. The ARCE fellowship has greatly facilitated the preparation of this manuscript and has allowed us to make use of much new material on Middle Eastern urban society.

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\*Please see pages 7 and 8 of this NEWSLETTER for a description of Dr. Dewey's index.



TELL EL-MASKHUTA:  
FIRST SEASON, SUMMER 1978

Lisa Kuchman  
University of Toronto

Under the direction of John S. Holladay, Jr., the University of Toronto/American Schools of Oriental Research Wadi Tumilat Project, funded by the Smithsonian Institution and associated with the American Research Center in Egypt, excavated for eight weeks at Tell el-Maskhuta in the eastern Delta, just west of Ismailia. The staff consisted of nineteen members from North America and England. The basic objectives of the first season were to determine the nature and extent of occupation on the mound and to establish a stratigraphically-based ceramic chronology for the site. After preliminary exploration in a number of areas, the work concentrated in four areas on the tell.

Field C is located in a cemetery area on the eastern edge of the site. The date of the cemetery is probably confined to what was dated ca. 2nd century A.D. Roman, with three phases of use: subterranean mudbrick tomb chambers, simple pit burials, and infant burials in amphorae. The tomb chambers contained multiple burials, all badly plundered. Three small gold pieces, carnelian beads, carved pins, and two glass bottles, however, indicate the richness of the original burials. The pit and amphora burials were cut down along the outside of the tomb walls. Virtually devoid of grave goods, these burials were all undisturbed. Well-stratified, but badly cut-up Ptolemaic occupational levels yielded good ceramic, numismatic, and osteological data.

The other three main areas opened up were in the central section of the tell, where brick walls were visible on the surface. Area H revealed a series of walls and rooms of a successively rebuilt dwelling. The earliest pottery was ca. 5th-4th century B.C. Persian, with pieces in later pits and fills dating through ca. 3rd-2nd century B.C. Hellenistic. The latest intrusions were ca. 2nd century A.D. Roman and modern. The work concentrated in three rooms; many of the floor levels, however, had been badly pitted in Roman times. A well, beautifully built of limestone blocks, was discovered and cleaned. The pottery was mainly from the early Persian period (ca. 6th-5th century B.C.) with some fine imported Greek red-figured ware.

Area E revealed a massive mudbrick structure built during ca. the 1st century A.D. Roman period and destroyed in the 2nd century. There was no clear evidence of its purpose, although it was definitely not domestic. The building contained seventeen different rooms, the larger ones in the center of the complex surrounded by the smaller. A subsidiary field, D, contained a series of 1st century A.D. Roman walls connected with the large structure in E.

Field L, located just east of H, yielded two major strata: Persian occupation and MB II A/B burials. The most significant of the Persian remains was room 2037, with a great quantity of broken but completely restorable pottery of ca. the 6th century B.C.: jugs, cooking pots, flasks, cups, pitchers, plates and lids. Below the Persian occupation and covered by virtually sterile yellow sand were three MB II A/B burials of Syro-Palestinian or "Asiatic" type, similar to those previously found by Manfred Bietak at Tell el-Dab'a. Two were within coffin-shaped mudbrick chambers with vaulted ceilings. Remains of a skull, dagger, goblet and two pyriform juglets were found in one of these distinctive tombs. The second grave produced a dagger, pottery stand and bowl, and accompanying donkey burial, but no body was found. The third burial was within a small mudbrick rectangle. The body was contracted on its right side facing east. A jug was at its head, a sheep alongside, and a dog at its feet.

Thus the earliest occupation found to date at Tell el-Maskhuta was at the period of Asiatic infiltration preceding the Hyksos period. There is then a long gap, with the next period of occupation presently attested being 6th century B.C. Persian. Occupation continues through the 2nd century A.D. Roman. This was the latest ancient material found at the site. Saite materials, found by other earlier excavators at Maskhuta, were not located in the areas excavated during the 1978 season. The chief objectives for the 1979 season will be further investigation of the MB II A/B cemetery area, Persian occupational levels, Ptolemaic housing areas, and an attempt to discover the location of the Saite occupational area.

"WHAT ARE THE AMERICANS TRYING TO FIND  
IN THE GROUND AT MASKHUTA?"

By Refaat Fouada, Reporter

Cover story, October Weekly,  
the weekly Egyptian news magazine, June 25, 1978.  
Translated by Hanna Tadros and Susan Spencer.

Another Egypt is still there underground. For this reason, many archaeologists come to rediscover ancient Egypt under the sand of modern Egypt. These archaeologists come from America, Austria, and England. They excavate at Sharqia, Giza, and Aswan because the worldwide belief is that there is another Egypt which we haven't uncovered yet. To protect the ancient Egyptian remains, we have rejected the proposal to construct a large tourist complex on the Giza plateau and other projects to modernize Egypt.



I went to the Ismailia area to the village of Maskhuta, near Abu Suwer, 14 km. west of Ismailia, to meet the members of the Canadian-American expedition excavating there. They are attempting to find the trade route which connected Egypt and the rest of the ancient Near East. The expedition, which is directed by Professor John Holladay, 47, is funded by the Smithsonian Institution. The expedition came to carry out a complete survey of the large tell at Maskhuta. The group has started digging in five different areas of the site.

Before we discuss this excavation, we have to trace the history of the site. This expedition is not the first one to excavate at Maskhuta or in the Wadi Tumilat, named after the Tumilat tribe of bedouin who came from Saudi Arabia to settle in the area. In 1868, Edouard Naville, a Swiss archaeologist, came to Maskhuta to excavate and write a book describing what he found. When the French came to dig the Suez Canal, they found some pharaonic remains which indicated that the area was important in antiquity. They found three seated statues made of granite, facing east. They depicted Atum, Ramses II, and Ra. The French thought that Ramses II put his statue in this area to show that he ruled the Jews in the Eastern Delta; however, the Jews were always rebelling against him. Lepsius thought that the inhabitants worshipped Ramses II as a local god and thereby identified Tell el Maskhuta as the ancient city of Raames, which was built by the Jews according to the Old Testament.

The Egypt Exploration Society (London) sponsored Naville. When Naville started excavating at Maskhuta, he thought that the city was Pithom, which was built by Ramses II to serve as a military installation for the Egyptian forces fighting in Syria against the Hittites. He found a statue of Ramses II and a stela inscribed with some of his victories. He found another stela on which Ptolemy II had recorded all the Ptolemaic history of Egypt. When Naville stopped digging he was certain that Maskhuta was on Egyptian land.

In 1970, Mohammed Abdel Haq Rageb, the chief inspector of the Eastern Delta, started excavating at Maskhuta. He agreed with Naville's conclusions. He thought that the site had been used to store food for the Egyptian army during the reign of Ramses II because he found large amounts of corn, wheat and seeds in addition to amulets and stelae. The inscriptions invoked the aid of the gods to bring victory to Ramses II.

Early in 1978, Mohammed Selim found Ptolemaic tombs at Maskhuta. In one of them, he found a complete mummy wrapped in cloth which contained amulets with Demotic inscriptions on them. He did not dig extensively since he had been given very little money.

The University of Toronto expedition arrived on May 16, 1978. The group includes nineteen members from different fields of study. Carol Redmount, 25, who studies Roman history at the University of Chicago, is visiting Egypt for the first time. Edward Banning, 22, studies Near Eastern archaeology at the University of Toronto. He looks like President Jimmy Carter. Patricia Crawford, 34, is a paleobotanist from Brandeis University. Lisa Kuchman, 27, is getting a Ph.D in Archaeology from the University of Toronto. She assists the director, Dr. Holladay, in the field. Elizabeth McVey, 30, is getting a Ph.D in Coptology from the Catholic University in Washington, D.C. Larry Lacelle, 33, is a soil specialist. Mary Joan Leith, 20, from Harvard University is a specialist in ancient Egyptian art. Mary McKercher is the photographer. The expedition also includes Rosalyn Wendy Rubenstein and a professor of Ancient Hebrew, Theodore Lutz.

The excavators wake up at 4:00 a.m. Breakfast is at 5:00. Then they go into the field until 9:00 when they come back to camp for a second breakfast. I think second breakfast is an American custom. They return to the site and continue working in the scorching sun until 11:30. At 11:30, they return to the dig house, which is the elementary school of the modern village of Ezbet Maskhuta. At the dig house, they sort pottery and draw it and photograph and study what is found in the trenches. The inspector registers everything that is kept and the finds are taken to the Egyptian Museum at the end of the season. At 1:00 p.m., Mrs. Phyllis Holladay, the director's wife and camp supervisor, rings the bell which announces that lunch is ready. After lunch, everyone rests until 4:00 p.m. Then they work from 4:00 to 6:00.

I asked Professor Holladay what he had found at Maskhuta. He stated that the most important area was Field C where tombs with child burials had been found. He added that these children might have been sacrificed as offerings when the Roman city was founded. The children were buried in amphorae. Two gold pieces found in Field C might be part of a gold mask for one of the burials dating to the Roman period.

Professor John Van Seters, 43, is a specialist in the Old Testament from the University of North Carolina in the United States who has written a book about the Hyksos. I asked him about the city of Raames which was mentioned in the Old Testament and the ancient relations between Jews and Egyptians. He said that the name of the city is mentioned in the Old Testament in Exodus 1:11. In Ur, the capital of Chaldea, Abraham was trying to recognize God, but he was opposed. He left Ur with his wife Sarah and went to Canaan. He could not stay in Canaan because the country was poor, so he left for Egypt. In Egypt, the Egyptians offered him everything. Even the Pharaoh, whose name we do not know, gave him Hagar, the most beautiful slave in Egypt, as a gift. Abraham decided to go back to Canaan. Sarah could not get pregnant, so she asked her husband to marry Hagar. Hagar gave birth to Ishmael. Sarah was unhappy, so she asked Abraham to send Hagar and Ishmael away. He sent them to Saudi Arabia where Ishmael grew up and married one of the Saudi Arabians becoming the forefather of all the Arabs. Although Sarah was very old, God permitted her to have a child called Issac who was the father of Jacob.



Jacob who was Israel was the father of the Jews. Jacob had 12 children: Joseph and his brothers. Joseph came to Egypt when he was a child. He became a steward of the pharaoh and he was loved by the Egyptians. At that time, there was a famine in Egypt and Canaan. His brothers came to Egypt looking for food. When they recognized Joseph, he gave them everything they asked for. Joseph asked them to bring their father with them the next time they came. The Israelites began to settle in Egypt when Jacob came with his entire family consisting of about 70 people. They lived in the Eastern Delta which was called Goshen. The Egyptians treated these Israelites well because they were Joseph's relatives. They didn't work since the Egyptians gave them everything they needed. When Ramses II came to the throne, he thought that the Israelites should work, so he asked them to build Pithom and Raamses. According to the Old Testament, they refused to build the cities and left Egypt.

At the dinner table, the members of the excavation talked about many different things just as the Egyptians do. I think they adopted this custom from the villagers at Maskhuta. I talked to Professor Holladay whom the staff members call mudir. Mudir is the first Arabic word that the excavators learned. I asked Professor Holladay if the Israelites entered Egypt at a poorly guarded point and came to Goshen. He said: "I am one of the archaeologists who differentiates between what the Old Testament says and what archaeology reveals. I believe what I read in the inscriptions which record the history of the area. In this area, we have not found anything regarding Goshen or the cities of Pithom and Raamses mentioned in the Old Testament, nor have we found any evidence of building activity by the Jews. According to the Old Testament, the Egyptians invited the Jews to come down to Egypt because there was a famine in Canaan, and they supplied the Jews with food."

An analagous situation would be the following: I invite you to visit me and I give you a room to live in. I also give you everything else you need. Then your descendents come and say that this room is theirs because a distant relative was once there.

An Egyptian member of the expedition is Hanna Tadros, a graduate in Egyptology from Cairo University. Hanna has asked the Egyptian companies that give tours to help the Department of Antiquities by giving money to Egyptian excavations. These companies make lots of money by taking tourists to archaeological sites in Egypt. He also suggested that they give money to the faculty of Egyptology at the university.

Susan Spencer and Mary Joan Leith said that the nicest thing that could happen to them in Egypt would be meeting President Sadat. They said they would at least like to see him drive by in a motorcade if they can't meet him. I asked them why they wanted to meet Sadat. They said, "When we see him on American television, we feel that this man is honest and has a sensitivity and emotional side which many politicians lack." I told them that the pages of October Weekly would carry their wish to Mr. Sadat.

## NUMISMATIC RESEARCH IN CAIRO

Norman D. Nicol  
University of Washington\*

For the visiting researcher, studying Islamic numismatics in Cairo can be very rewarding. I offer this note to be of use to the reader contemplating a research project in Egypt using numismatic evidence. For information about numismatic research in the Middle East in general, I direct the reader to Dr. Jere L. Bacharach's "Numismatic Studies in the Arab World" in the ARCE Newsletter of October, 1971. This article is an updated version of the portion of that report dealing with Egypt.

The largest collection of Islamic coins available to the researcher in Cairo is housed in the Museum of Islamic Art. Access to the collection is presently under the control of Madame Layla Mahmud Salih. However, Mr. Raafat M. el-Nabarawy, who has recently received his master's degree from the Faculty of Archeology, Cairo University, will assume the duties of curator of Islamic coins at the Museum in September of this year. Mr. el-Nabarawy is a specialist in the coinage of the crusading period, both Muslim and Christian issues, as well as in the imitations struck by each faction. He also has a broad knowledge of Islamic coins in general and is familiar with the pertinent literature in western languages and in Arabic. He is very enthusiastic about meeting with and assisting foreign scholars. Dr. Hassanein Rabie, Professor of History in the Faculty of Arts, Cairo University, is quite familiar with the various aspects of numismatic research and is most willing to work toward bringing visiting and Egyptian specialists in the field together.

The collection of the Museum of Islamic Art, numbering upwards of 35,000 specimens, is arranged in cabinets according to acquisition number. Coins of the various dynasties up to and including the Ikhshidids and acquired before 1965 have been catalogued by Dr. <sup>C</sup>Abd al-Rahman Fahmy in al-Fajr al-Sikkah al-<sup>C</sup>Arabiyah (Cairo, 1965). It is only necessary to note the acquisition number located in the text adjacent to the catalogue number in order to see any specimen listed in Dr. Fahmy's work. One can locate coins of other dynasties and those acquired since the publication of the catalogue by referring to the handwritten list. Specimens in this category are usually identified by dynasty and often by mint and date as well. The researcher can easily obtain photographs of any specimen, using either his own equipment or that of the museum.

\*The following information was gathered while the writer was an affiliated fellow of ARCE, funded by a U.S. Office of Education, Fulbright-Hays Dissertation Research Abroad Fellowship, 1977-78.



Dr. Fahmy is no longer with the Faculty of Archeology, Cairo University, having accepted a position in Saudi Arabia. However, his influence in teaching and research in the numismatic field is still widely felt. His course offerings in numismatics at Cairo University are being carried on by his son, Samih <sup>C</sup>Abd al-Rahman Fahmy, who is also on the staff of the Museum of Islamic Art. The Faculty of Archeology also has a small collection of Islamic coins available to the researcher.

Another major collection in Cairo is the former Khedivial Collection, housed in the old Dar al-Kutub, which is located in the same building as the Museum of Islamic Art. The collection numbers close to 8,000 specimens, about one-fourth of which Stanley Lane-Poole catalogued, Catalogue of the Collection of Arabic Coins Preserved in the Khedivial Library at Cairo (London: Bernard Quaritch, 1897). This collection contains many rare or scarce items which have not yet been adequately studied. It is currently under the control of Dr. Mahmud al-Shinititi, Vice-Minister of Culture, but is not readily accessible while the Dar al-Kutub is in the process of moving to its new building in Bulaq. A new catalogue of the entire collection is presently being contemplated, which should make this important body of material available to the specialist.

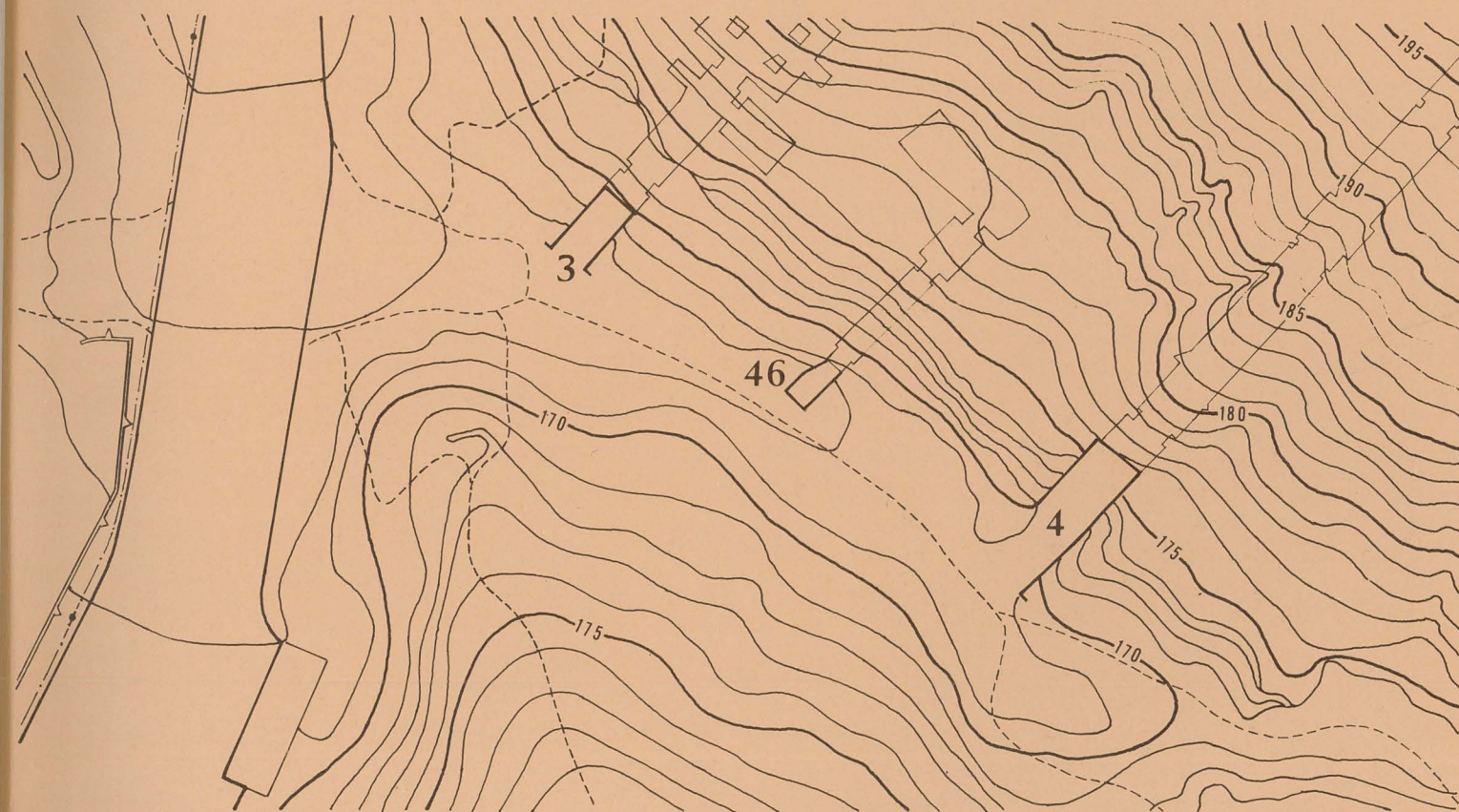
The Museum of Islamic Art has gradually improved its collection of published numismatic reference materials since Dr. Bacharach's last survey. The museum now owns the catalogues of the major European monographs and off-prints. More up-to-date reference works such as Dr. John Walker's British Museum catalogues and Max von Zambaur's Munz prägungen des Islams are on the shelves. The museum library staff has brought together in the library most of the publications of the American Numismatic Society (Museum Notes, Numismatic Notes and Monographs, Numismatic Studies) dealing with Islamic coins. In addition, the library contains catalogues of Islamic coins in Indian collections and many works on numismatics printed in Arabic. The only serious lack of published sources is in the area of journals dedicated to the field such as Numismatic Chronicle and Révue Numismatique.

There are several private collections in Cairo which are occasionally available to the researcher. The most notable is that of Dr. Henri Amin Awad, who has a number of rare and unusual specimens. He is a major benefactor of the Museum of Islamic Art and is normally disposed to help the visiting scholar. For the researcher who is also a collector, the Cairo market does not have a great number of medieval specimens to offer. Most coins for sale are nineteenth and twentieth century issues, but an occasional silver or copper piece will turn up. Gold dinars are more often encountered, but at rather inflated prices for common types which can usually be purchased in the West at more competitive prices.

# THE BERKELEY MAP

## OF THE

# THEBAN NECROPOLIS



PRELIMINARY REPORT 1978



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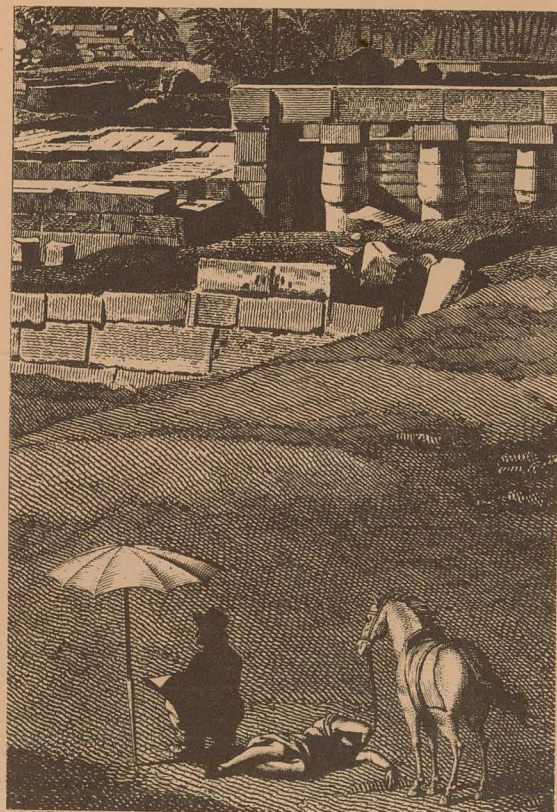
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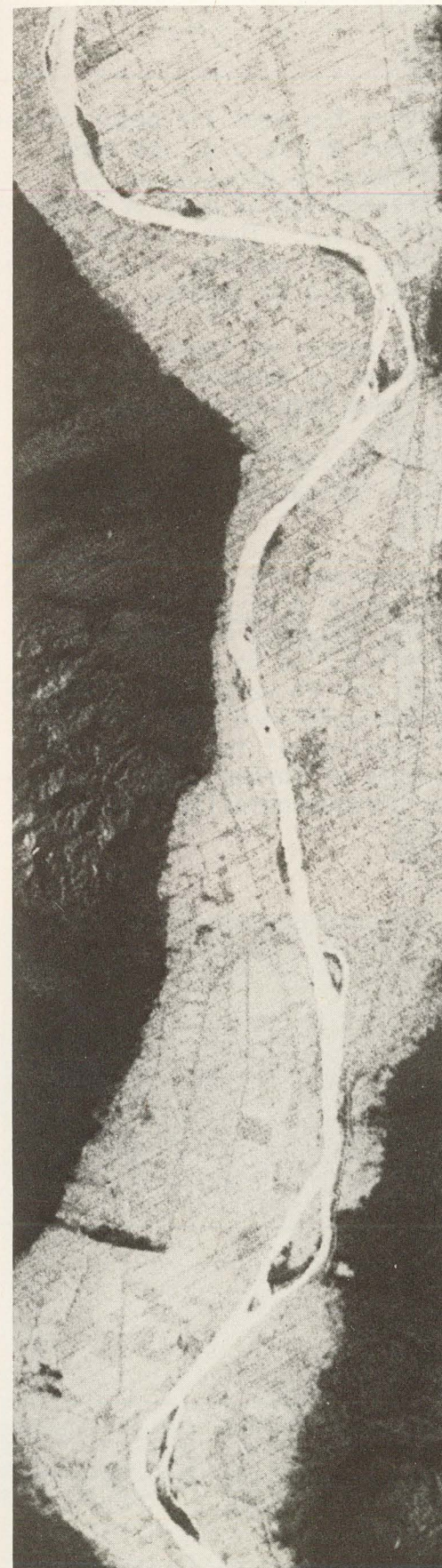
## SUMMARY

No area of the world contains as many famous and important archaeological remains as the West Bank at Luxor. Yet, in spite of centuries-old interest in such features as the Valley of the Kings, the Tombs of the Nobles, and scores of other monuments, there exists no accurate or complete map of the Theban Necropolis. Fewer than ten per cent of its monuments have ever been mapped and planned, and very few of these have been plotted accurately.

This project seeks to establish a survey network over the Theban Necropolis; to prepare a suitably detailed 1:500 archaeological map with 1:250 and 1:100 plans and sections of significant archaeological features; to publish these maps and plans, together with more detailed records of measurements, in a library and a field edition; and to accompany these graphic aids with a concordance and catalogue of West Bank archaeological materials.

Such a map not only will be a most useful research tool for Egyptologists; it also will play a significant role in the preparation of long-range plans for the protection and preservation of the rapidly-deteriorating monuments at Thebes.

The following report summarizes the progress made on The Berkeley Map of the Theban Necropolis during the first season of work at Luxor, from 1st April through 30th June 1978.



Satellite photograph courtesy NDAA



## BACKGROUND

### THEBAN MAPPING PRIOR TO 1900

There are known to exist a very few maps and descriptions of small parts of the West Bank or plans of its more obvious monuments that were drawn in dynastic or in Classical times. But the preparation of maps of a modern form began only in the 19th century. Then, scores of maps were prepared by scholars and tourists to accompany their records of visits up the Nile to Thebes.

Among the best-known and most useful of these are the still unpublished maps and plans of Gardner Wilkinson, who visited Thebes several times between 1821 and 1855 (and whose Topographical Survey of Thebes was published in 1830), and Robert Hay (who visited between 1824 and 1838), or those of such other luminaries as Champollion le Jeune or Giovanni Belzoni.

The folio map sheets that accompany the French Expedition's sumptuous Description d'Egypte and those prepared for the Denkmäler aus Aegypten of Richard Lepsius are among the most attractive to be found anywhere. But all of these maps are at very small scales--from 1:10,000 to 1:250,000 and more--and they only schematically indicate the position of the more obvious monuments. For modern students of Thebes, they are neither topographically nor archaeologically adequate.



### THEBAN MAPS FROM 1900 TO 1960

The first decades of this century were among the most archaeologically active at Thebes, and it was then that the first systematic and large-scale mapping projects were undertaken: Howard Carter published a topographically useful sketch of the Necropolis; Harold Nelson began his excellent series of Key-plans for the Oriental Institute; Schiaparelli and Schweinfurth offered detailed surveys of those parts of the Necropolis studied by their institutes. But the principal surveys of this period were those of Emile Baraize, the Survey of Egypt, and, later, the Centre of Documentation.

Baraize, Engineer with the Antiquities Service, had begun preparation of a 1:500 survey of Thebes in 1904. A combination of sketch-plans, measured drawings and small area surveys, it was more accurate than previous maps although, as Reginald Engelbach was later to note, the constant encroachment of native buildings into archaeological areas made each sheet obsolete nearly as soon as each had been completed. Baraize's map was never published, but it served as the basis for the systematic catalogue of private Theban tombs published by the Service in 1919 and supplemented in 1924.

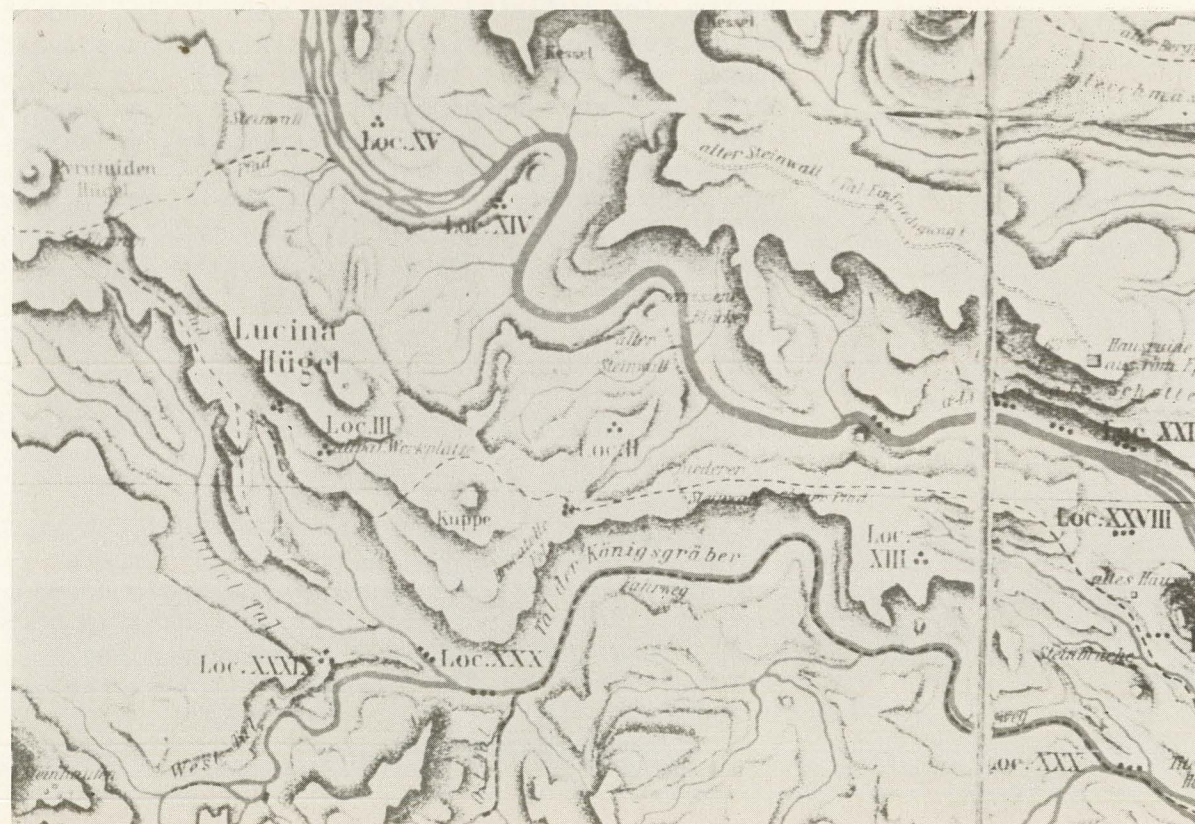
It was during the preparation of the Topographical Catalogue of the Private Tombs of Thebes that it became apparent how badly a new and accurate map of the entire Theban Necropolis was needed. Robbery, vandalism, the building of modern structures, and the deterioration of reliefs and paintings by natural agents were rapidly taking their toll, and Engelbach noted that when he broached the idea of a new survey with the Surveyor General of Egypt, he "readily saw how urgent the matter was." Among other things, the Catalogue had listed fewer than 400 of the thousands of private tombs known to exist at Thebes and, however poorly preserved these others, Engelbach believed that all required a published tomb plan, a note of their exact location, and commentary on their texts and paintings. Nevertheless, it was decided to include only the numbered tomb plans in the new survey; a more elaborate plan would have been economically impossible at the time.

Working partly from Baraize's map, Engelbach wrote in 1924, the Survey made a record of all numbered tombs. "By October, 1921, the maps of the whole necropolis were practically completed. These consisted of 36 sheets to a scale of 1/1000, and covered the area bounded by the Palace of Amenophis III to the west, the



cultivation to the south, the extreme end of the village of El-Tarif to the east, and the valley known as Wadyen to the north. . . . It was proposed that, having gone so far, they should be put on sale . . . , but it has seemed more prudent to defer such a publication until something in the nature of a monumental work could be brought out. . . . It is, at the present moment, slightly premature to bring out the contoured edition of the whole 38 sheets of the Necropolis, since the Palace of Amenophis III, to the south of Medinet Habu, has not yet been published by the Metropolitan Museum, New York, and the discovery of the Tomb of Tutankhamun has delayed, for three years at least, the final excavations and arrangement of the paths in the Tombs of the Kings. The Survey Department, however, has agreed to publish the contoured sheets, giving details of the temples, for the area containing the private tombs, deferring the linking-up of the tombs of the Queens, Kings and the Palace of Amenophis III until the results of the latest researches are available. The field work on these 15 sheets is now finished . . ."

In fact, with the exception of but five additional sheets, this is all of the Survey that was ever published. One of the greatest problems with the 1:1000 series, therefore, is that it is not complete. Areas south of Medinet Habu, the gebel north of Deir el-Bahari, the West Valley, Tarif, and the gebel between the Valleys of the Kings and Queens never appeared. But there are other problems with the Survey, too.



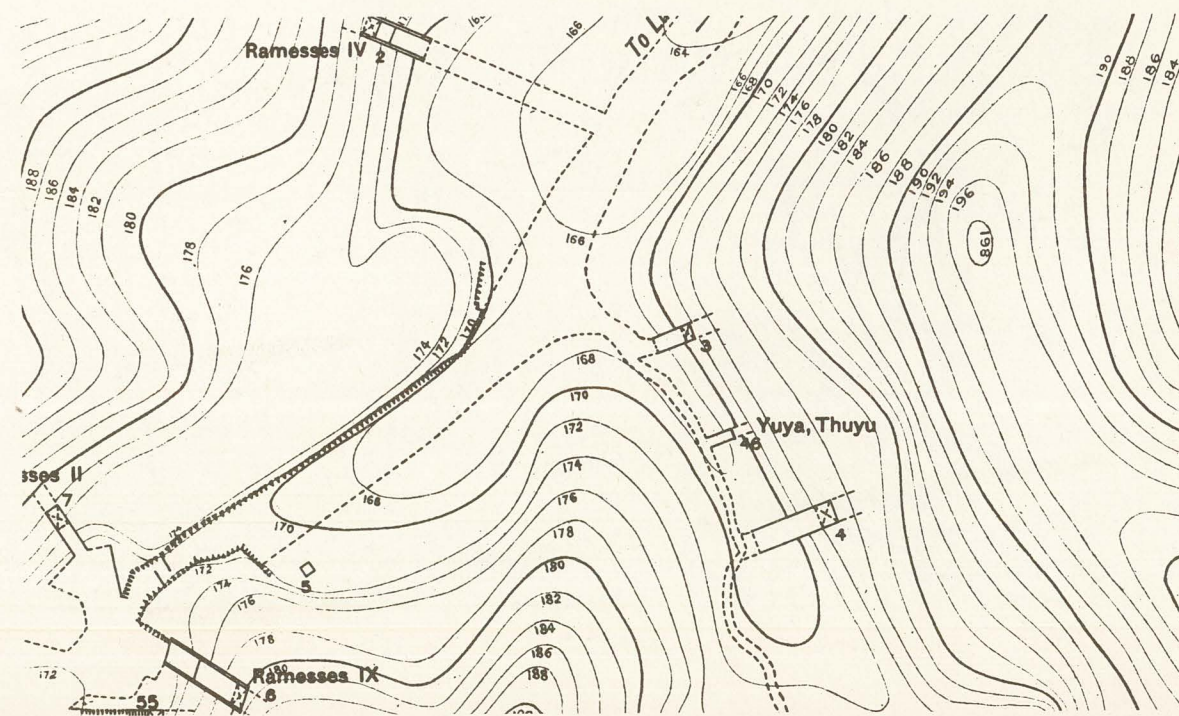
First, only certain tomb entrances in the area of the Tombs of the Nobles were included. Of the thousands of tombs known to exist in this area, the Survey included only the entrances of those known to be of particular artistic or historical merit. Only 334 tombs--possibly less than fifteen or twenty per cent of the total that exist--appeared on the Survey maps.

(An example of these proportions may be seen in the results of a survey that we made in 1976 of a small wadi, called Khawi Alamat by Howard Carter, lying some two hundred metres from his West Bank headquarters. We counted over 35 tombs in this wadi; the Survey map (sheet C-7) shows only 7. Many of the 28 tombs that were not included still contain traces of scenes and texts, including names and titles, on their walls).

There are errors in the Survey, most of them due to the scale at which the map was drawn and to the techniques and equipment available at the time of its preparation. Horizontal measurements especially must be re-checked today.

Obviously, no work done since the Survey was published over 50 years ago is included in it. Attempts to publish annual updates in ASAE continued for only two years before they were abandoned.

Valuable though it is, the Survey of Egypt's 1:1000 map of Thebes is therefore incomplete and out of date. Especially of concern is the omission of many of the Tombs of the Nobles and the absence of any subterranean features on the map sheets. The Survey has served Egyptology remarkably well for half a century, but it is time that it was improved upon.





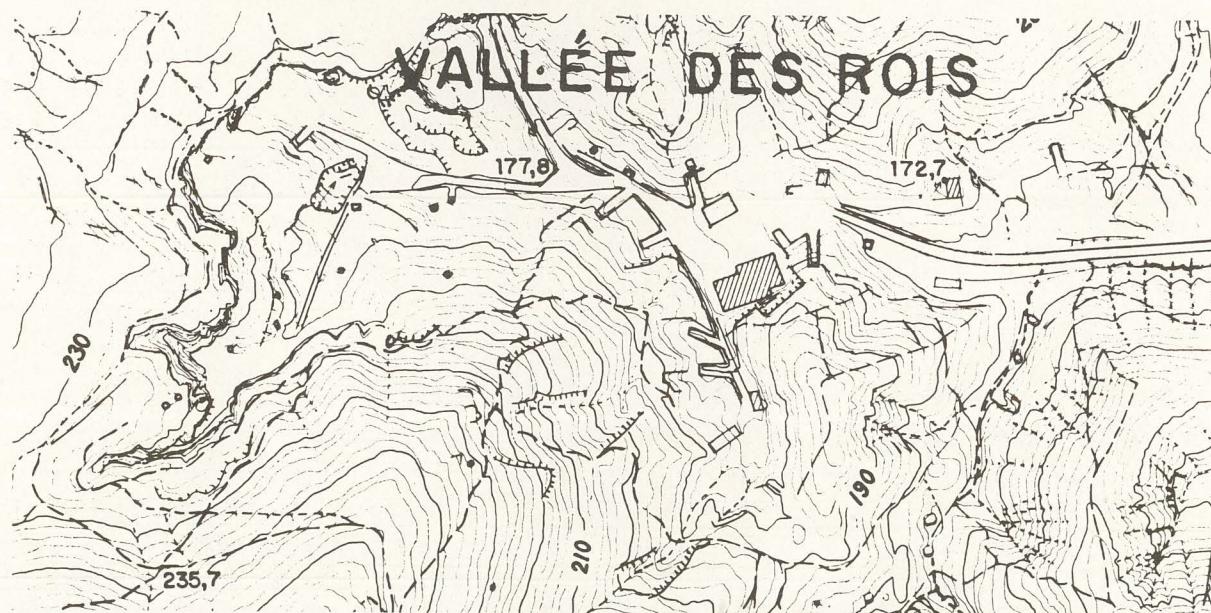
## MAPS SINCE 1960

During the past two decades, only two comprehensive mapping projects have been undertaken in the Theban Necropolis. The most recent is that of the University of California, Berkeley. The other was prepared for the Centre of Documentation by the Institut Geographique Nationale de Paris to accompany a monumental study made in 1959-1969 of the graffiti found on the hillsides of the West Bank.

Based upon aerial reconnaissance and subsequent photogrammetric studies, a 1:10,000 map of a portion of the Necropolis was published in 1969 (with more detailed sheets at 1:2000 published of the Valleys of the Kings and Queens.) There is no question that this map is of great value for any topographical study of the Theban area or that its accuracy is a great improvement upon that of the 1926 Survey. Unfortunately, the map is not complete. The aerial runs upon which it was based do not cover the entire archaeological region of the West Bank, and the contour maps based upon these runs are even less comprehensive. The southern and northern ends of the Necropolis are lacking, as are surveys of the Tombs of the Nobles and other critical areas.

The scale, 1:10,000 with 5-metre contour intervals, is not adequate for detailed archaeological study, and the absence of any tomb entrances (except those on the 1:2000 sheets) makes archaeological study impossible.

The Centre's map is a valuable tool, ideally suited to the purposes for which it was undertaken. But for more elaborate archaeological studies, it, too, must be improved upon.



## THE OBJECT OF A NEW MAP

In spite of nearly 170 years of Theban mapping, then, there does not yet exist an accurate and archaeologically complete map of the Theban Necropolis. What should any new map of this important area include? And why is the preparation of a new map of special importance at this time?

Any new map of the Necropolis should be published at a scale large enough that all significant archaeological features can be plotted easily and accurately, and so the close relationship between those features and the terrain can be studied.

Sufficient geographical detail must be included in a new map to permit the easy and accurate location of both hypsographical and subterranean features. Such items as paths, cairns, caves, and fissures, or modern improvements such as roads and power lines should be included, and a grid system should permit the precise description of the location of all features.

Subterranean elements, such as tomb shafts and chambers, or natural breaks in the bedrock should be noted in detail. The Theban Necropolis, honeycombed with such features, requires three-dimensional cartographic description. Such plans and sections and dimension schedules as those described below will make possible future architectural studies by our colleagues. They will permit studies of how tomb design was affected by the immediate environment, and will make possible the more precise application of electronic technology such as several expeditions now propose in the Necropolis. They will make it possible for us to more accurately identify tomb types and to see if these types distribute themselves in significant ways over the Necropolis. Correlations between "soziale Stellung und Grablage", and more accurate descriptions of how the Theban Necropolis grew also will be more meaningful with such a map available.

Such a map will provide archaeologists with a master-key to the monuments of Thebes. The Berkeley Map will include a grid reference system for locating archaeological materials more accurately and easily than ever before. It also will include a series of indices of personal names, geographical locations, tomb types and dates. It will show the precise orientation of tomb axes and temple walls both in relation to true north and to the grid network. The grid network itself will be based upon the baseline of the Temple of Karnak in order to provide a single reference system for the entire Luxor area. The precise elevation of each archaeological feature, surface and subterranean, also will be included.



A new map of the Necropolis will provide the Egyptian Antiquities Organization with a badly needed reference from which it can better design plans to safeguard the Theban monuments from theft and vandalism. Any future archaeological work can be better planned, and any future construction in the archaeological areas can be better designed to function with minimal interference to the monuments once such a map is prepared.

For the Tombs of the Nobles, brief notes of the type that Engelbach suggested will be made, indicating something of the present condition of each tomb, its owner, and its potential for archaeological or epigraphical work. No such record exists today, even for many of the 400 numbered tombs on the Necropolis. Some type of system is essential, however, if a long-range plan for the conservation of these tombs is to be designed. Since the mapping of each tomb requires a careful inspection of all its accessible chambers, the preparation of these additional notes is easily prepared at the same time.



## PROGRESS DURING 1978

The first season of work at Luxor was conducted from 28 March to 28 June 1978. During these three months, a number of basic tasks were accomplished that will facilitate work in all subsequent campaigns. In addition, a start was made on the preparation of the Berkeley Map sheets themselves and a sample of such a map sheet was prepared for examination by our colleagues.

The grid network, upon which all future work will be based was set out, and a detailed explanation of its character is given below. Rather than establishing an entirely new grid scheme, it seemed logical to make use of an already-existing one. We therefore have taken the grid established at the Temple of Karnak and extended it across the river. A single grid network therefore now exists for the entire Luxor area. It was not possible, however, to make use of the Karnak grid numbering system (we would have quickly run out of numbers) and an infinitely expandable grid numbering system has been adopted in its place.

Elevations were run for all points on the major and minor traverses and for a large number of intermediate points as well.

A series of major and minor traverses were run across the West Bank and will provide the basis for all further survey work. Fixed points in each of the major areas have been tied together, and an intensive network in the Valley of the Kings will permit us to complete our work there within the next season.

To provide an example of what the finished map sheets might look like, two grid squares at the entrance to the Valley of the Kings were topographically mapped. Mapping was done at a scale of 1:250 and published at 1:500 with 1-metre contour intervals.

Maps, sections, and dimension schedules were prepared for seven tombs in the Valley of the Kings. Of these, four appear on the sample map sheet. Tomb plans were drawn at a scale of 1:100 for publication at 1:250. The tombs mapped were:

VK 1	Ramesses VII
VK 2	Ramesses IV
VK 3	Ramesses III
VK 4	Ramesses XI
VK 5	(Inaccessible but tentatively plotted)
VK 6	Ramesses IX
VK 46	Yuya and Thuya
VK 55	Tiy (?)

(It should be noted that we have made no attempt to confirm or to question the attributions of any of these tombs. For present purposes, we simply are following Porter-Moss, with a few minor emendations.)



## SURVEY METHODS

### HORIZONTAL CONTROL FOR MAPPING

A. Basis of Control The axis of the Temple of Amon at Karnak, as determined and monumented by the Franco-Egyptian Mission in 1968, was adopted as azimuth control for the Berkeley Map grid. This line was assigned a coordinate value of North 100,000 metres. The most westerly monument that was recovered on the Karnak axis was labelled traverse point 2. It is a steel pin in a 'box' which is recessed at the westernmost end of the entranceway sphinxes leading to the 1st pylon. Traverse point 2 was assigned a coordinate value of East 100,000.00. It was measured as being 81.67 metres westerly of another iron pin that lay in the earth in the entranceway through the 1st pylon. Another monumented point on the temple axis was found at a measured distance of 401.61 metres to the east. This point was named traverse point 1 and together with traverse point 2 forms the basis for azimuth control of the Berkeley Map grid. Thus, the Berkeley Map grid is a westerly extension of the Franco-Egyptian grid of the Karnak area. To permit easier and wider-ranging reference to this grid, the coordinate values we have assigned differ from those used at Karnak itself.

Two check measurements were made against established distances within the Karnak grid system. The 401.61 metre measured distance mentioned above does not agree favorably with what we had presumed would be a distance of 400.00 metres. Because of this apparent discrepancy, another check was made. At the Temple of Mut the distance was measured between control points 3 and 7. These control points lie atop the temple's mud-brick enclosure wall at the southeastern and northeastern corners, respectively. The check measurement of 390.47 metres agreed within desired tolerances of the calculated value of 390.49 metres. (The difference of 0.02 metres represents an accuracy, or an agreement, of one part in 19,500 parts.)

B. Control Traverse Measurements The directions of all courses were measured with a Wild T-2 direction theodolite. This instrument is a second-order theodolite and is read optically to the nearest one second of arc. The instrument was shaded at each set-up by a large umbrella. Sightings were made on Wild Distomat sights which 'forced-centered' into the same theodolite tribrach that previously held the T-2. (Forced-centering provides optimum procedures for accuracy: instruments, set-ups and targets sighted upon occupy the exact same location during traversing).

Four sets of directions were measured at each station. (A set is comprised of an initial setting of the horizontal circle and an ensuing measurement of direction with the telescope upright and then with it inverted.) Each set was measured with a different initial setting of the horizontal circle to eliminate any error from circle eccentricity. A rejection limit of five seconds was used for each station's measurements. Any set that differed from the mean of all four sets was rejected; the same initial value was reset on the circle, and the set was then remeasured.

Distances of all courses were measured with a Wild DI-10 Distomat. This is an invisible infra-red electronic distance measuring unit. Slope distances are measured with this EDM to an accuracy of one centimetre. The nominal range of the model Distomat used is 1,000 metres. The longest distance measured on the main control traverse was 799.14 metres between traverse points 14 and 15. Overall, the longest distance measured, 1,204.58 metres, was on a 'cut-off' traverse which was run to check the main control traverse.

Slope measurements were corrected for temperature and atmospheric pressure, reduced to a horizontal value, and further reduced to sea level for use in grid computations of coordinate values and bearings.

C. Control Traverse Closure The total length of the 27-course traverse was 13,809.22 metres. Azimuth closure was 45 seconds: less than 2 seconds for each direction measurement. This error was distributed equally throughout the traverse. The adjusted azimuths were then used to calculate coordinates for each station. The error of closure was 18 centimetres in northing and 12 centimetres in easting. The resultant error was 0.02 metres. This error in 13,809.22 metres yields an accuracy of one part in 63,800 parts.

D. Control Traverse Adjustment Following the adjustment for azimuth described in C, above, the calculated coordinates were adjusted for 'zero-closure' by the 'compass rule'. This method of adjustment is based on the presumption that the measurements of direction and distance are of equal accuracy.

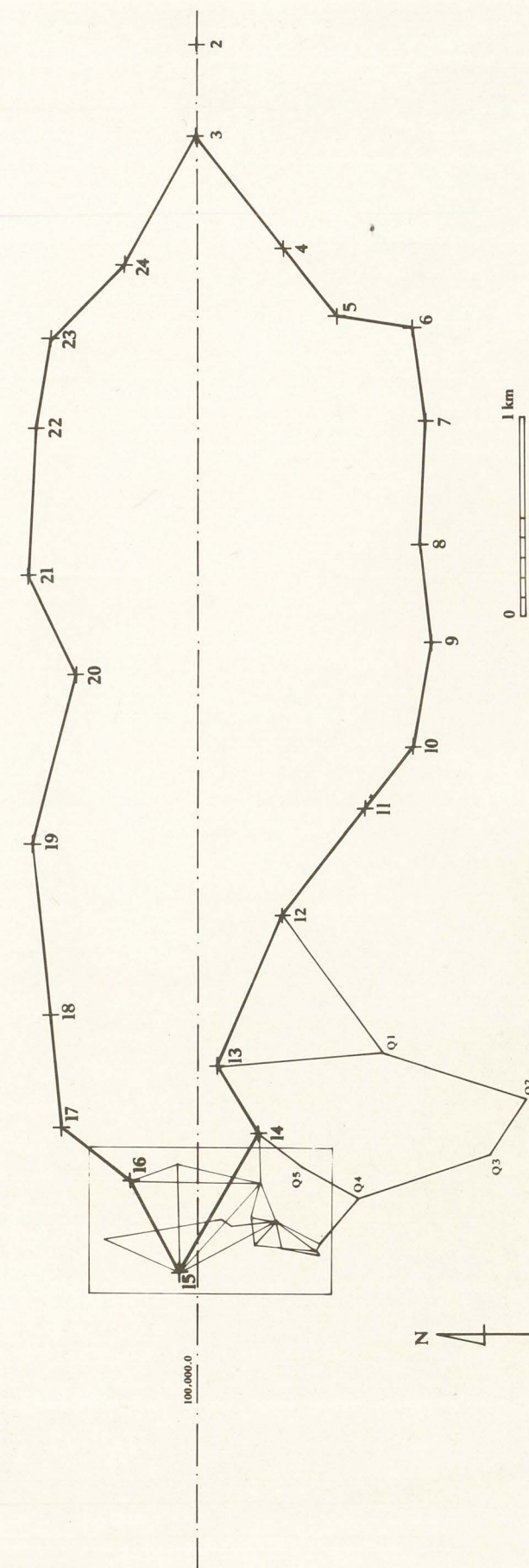
The traverse recrossed the Nile, from west to east on course 24-25, actually course 24-3 since outgoing station 3 is the same as returning station 25. Coordinates of the control traverse were adjusted to the outgoing values of station 3. Adjustments were electronically computed with a Hewlett-Packard HP-97 programmable calculator.



## VERTICAL CONTROL

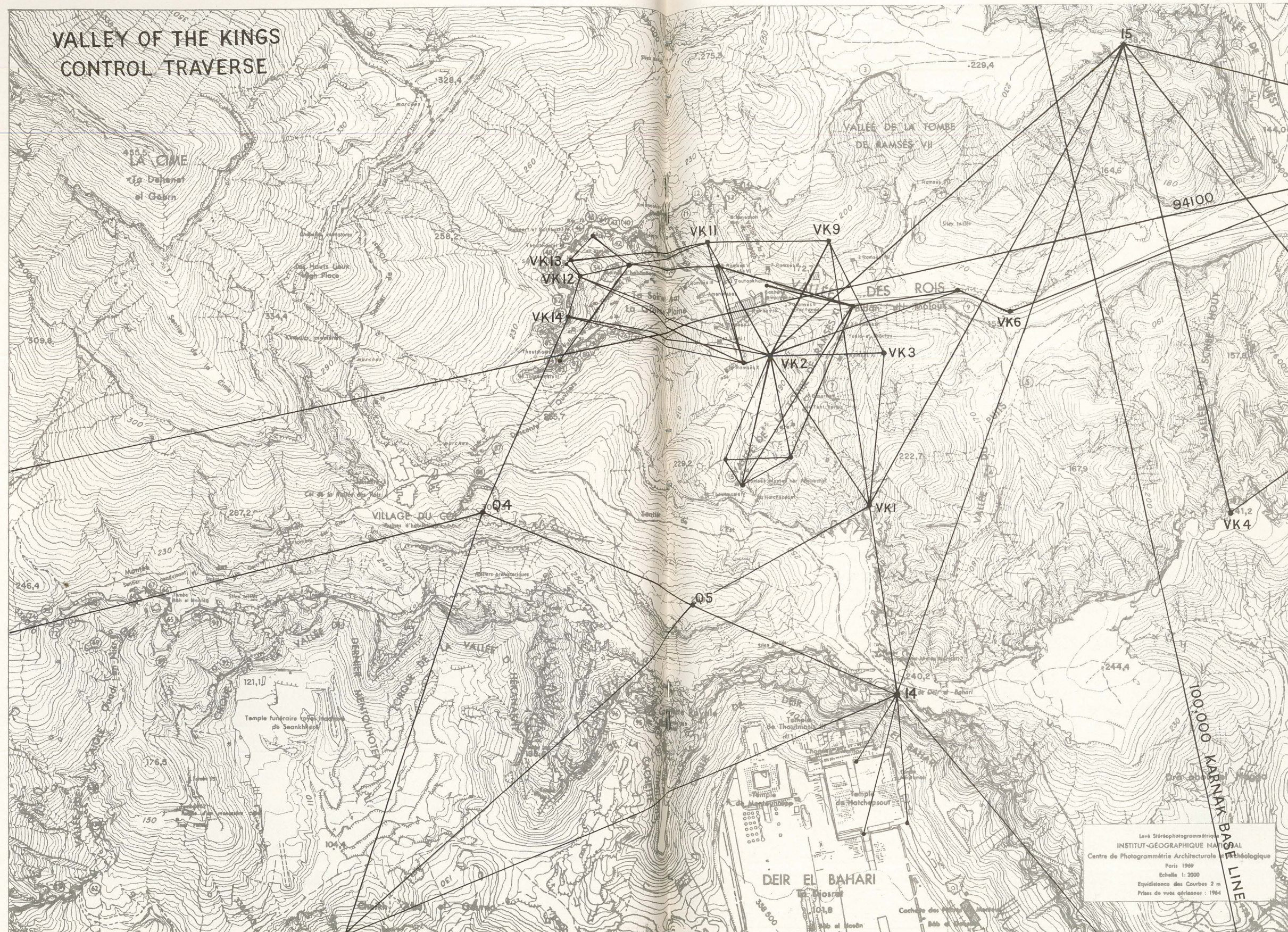
A. Basis of Control Three bench marks were recovered from the 1921 Survey of Egypt project, proved for agreement, and adopted for elevation control. One of the three marks is 15 metres northerly of Deir el-Bahari road at a distance of  $\pm 250$  metres easterly from Cook's Rest House. A second mark was found protruding from the wall at the southeasterly corner of the Qurna alabaster factory, 'Fabrike Alabaster Tut-Ankh-Amon', which is owned by the Gamal Mohammed el-Samman family. This mark is a 0.1 metre diameter pipe with an embossed Survey of Egypt plug. The third bench mark recovered was  $\pm 7$  metres northerly of the road to the Valley of the Kings, and several hundred metres westerly of Mr Howard Carter's house.

B. Vertical Measurements Elevations were determined by differential levelling and by trigonometric resolution of slope distance measurements and zenith angles. Three-wire differential levels were run with a Path optically-compensating pendulum level. Each line was run ahead and back to form closed loops. In areas of marked relief, differences in elevation between traverse points were determined solely by trigonometric means. Slope distances were measured with the Wild DI-10 Distomat EDM. Zenith angles were measured with the Wild T-2 theodolite. An umbrella was used to shade the theodolite and the EDM during measurements.





# VALLEY OF THE KINGS CONTROL TRAVERSE





C. Closures All lines, both differential and trigonometric, were closed either in loops or upon other lines. The differential lines closed at second-order accuracies and the trigonometric lines closed within third-order values.

D. Adjustment On the differential runs the differences in elevations used between bench marks were averages of the 'ahead' and the 'back' runs. These average differences in elevations were used in straight line adjustments from beginning to closing marks. The trigonometrically derived elevations were adjusted in the same manner.

#### GRID ORIENTATION

On the evening of 16 June 1978, eight sets of horizontal directions were measured from traverse course 14-15 to Polaris, the North Star. The first seven observations were made in the period just prior to lower culmination, with the last observation occurring just after culmination. The astronomical bearing of course 14-15 calculated at N 33°59'26" W. The Berkeley Map grid bearing of that same course is N 61°01'49" W. Therefore, a counter-clockwise rotation of 27°02'23" of any grid bearing will translate it to astronomic bearing.

Note: The above astronomic calculations are based upon the scaled geographic position of traverse point 14. The scaled values are: 25°44'20"N. lat. and 32°36'24" E. long. These values were scaled on the 1941 "Luksor" map, a 15-minute quadrangle of 1:50,000 scale.

#### USES OF THE BERKELEY SURVEY CONTROL

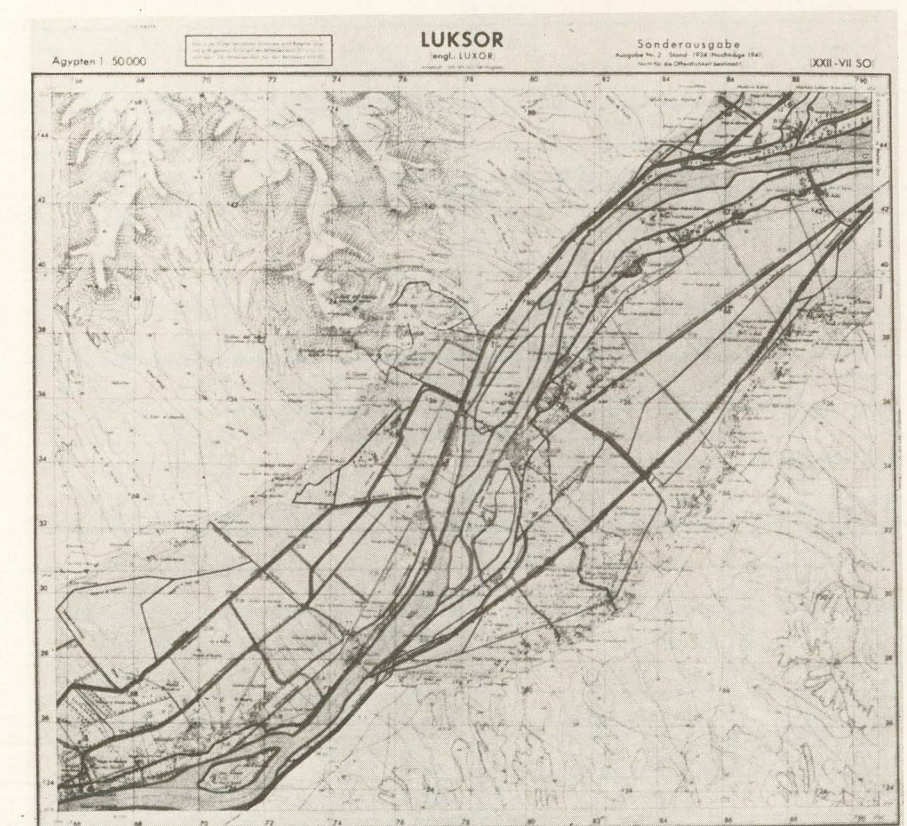
Both horizontal and vertical control established in this survey are adequate for conventional field mapping and for photogrammetric mapping. For the seven tombs that were planned in the Valley of the Kings during the first field season, their relative orientations are accurate within the range of ten to twenty seconds of arc. Positions of the control points outside each of the seven tombs will fall within a circle of error of two centimeters radius.

#### FIELD DATA SHEETS

The data collected during the first field season comprises four notebooks of EDM traverse-direction notes, horizontal direction notes, three-wire levels, details of survey points, and measurements of each of the seven tombs mapped this season. The forms on which these data were recorded

are standard forms adopted by the California State Department of Transportation. They were selected by us because of their clarity and completeness.

We believe that this raw data will be of substantial benefit to other projects working in the Theban area. Because of that, we have deposited complete sets of the field notes in the files of the Centre of Documentation in Cairo; the Cairo office of the American Research Center in Egypt; the office of the Inspector of Antiquities in Luxor; and the University of California, Berkeley. Additional sets of the notes are available to interested parties at cost. Examples of the four most common note forms appear on the following pages. Abbreviations used on the field sheets follow those of standard surveying practice.





EDM TRAVERSE — DIRECTION						Valley of Kings Control						
PARTY CHIEF GOODMAN		RECORDER TWAROWSKI		INSTRUMENTMAN LIGHTBODY		CHARGE—EXPEND. AUTH.			CO—RTE—PM			
EDM MODEL & NO. D1-10		THEO. MODEL & NO. T-2		PRISM TYPE *		SURVEY DESCRIPTION						
REMARKS Berkeley Map of the Theban Necropolis						WEATHER Cloudy/cool			DATE OF SURVEY 4/19/78		PAGE 14	OF
LINE NO.		VK 2-VK 11		VK 2-VK 9		VK 2-VK 12		horiz. dir. check		VK 2-B1		
OCCUPIED STA.		VK 2		VK 2		VK 2		14B		VK 2		
HI		1.354 + 0.3		1.354 + 0.3		1.354 + 0.3				1.354 + 0.3		
OBSERVED STA.		VK 11		VK 9		VK 12		VK 11		B1		
HI		1.541 + 0.233		1.438 + 0.235		1.415 + 0.283				1.444 + 0.283		
REFERENCE STA.		15		15		15		15		15		
REF. STA. POS. 1		D	00 00 00 00	Ave.	00 00 00 00	D	00 00 01 01	Ave.	00 00 01 01	D	00 00 00 00	Ave.
POS. 1		R	180 00 00 00	00	180 00 00 00	R	180 00 01 00	0.7	180 00 01 00	R	179 59 56 56	58
OBS. STA. POS. 1		D	281 09 28 27	27.2	334 46 25 26	D	240 07 53 53	53.7	281 09 32 31	31.5	203 00 43 44	42.5
POS. 1		R	101 09 27 27		154 46 27 27	R	60 07 55 54		101 09 31 32		23 00 42 41	
REF. STA. POS. 2		D	90 04 56 56	57	90 04 56 56	D	90 04 57 58	55.7	90 04 57 58	55.7	90 04 56 59	58.2
POS. 2		R	270 04 56 58		270 04 58 58	R	270 04 54 54		270 04 54 54		270 04 59 59	
OBS. STA. POS. 2		D	11 14 17 17	21	64 51 17 17	D	330 12 44 44	48	11 14 25 26	26.5	233 05 42 43	43
POS. 2		R	191 14 25 25		244 51 21 21	R	150 12 53 51		191 14 28 27		113 05 43 44	
REF. STA. POS. 3		D				D				D		
POS. 3		R				R				R		
OBS. STA. POS. 3		D				D				D		
POS. 3		R				R				R		
REF. STA. POS. 4		D				D				D		
POS. 4		R				R				R		
OBS. STA. POS. 4		D				D				D		
POS. 4		R				R				R		
ABSTRACT			27.2 24		26.2 22		53 52.3		30.8 30.8		44.5 44.8	
DIRECTION			281 09 25.6		334 46 24.1		240 07 52.6		281 09 30.8		203 00 44.6	
ZENITH ANGLES DIRECT			91 02 50 50		89 16 28 30		89 19 47 49				115 31 43 43	
REVERSE			268 56 59 60		270 43 19 18		270 40 07 08				244 28 18 17	
SUM			359 59 49		359 59 48		359 59 55.5				359 59 61	
MEAN Z.A.			91 02 55.2		89 16 35.2		89 19 50.2				115 31 42.7	
COMB. FACTOR			91 02 53.1		89 16 32.9		89 19 46.6					
TEMP./PRESS.			22 C 751 MM Hg		22 C 751 MM Hg		22 C 751 MM Hg		C F MM IN		24 C 751.5 MM Hg	
ΔD/100M OR PPM			+ 1.3		+ 1.3		+ 1.3				+ 1.4	
OFFSET												
DISTANCES RANGER: DI-10 READOUT			149.13		169.78		263.30				38.97	
READOUT			149.13		169.78		263.31				38.97	
ΔD			.002		.002		.003				.000	
SL.DIST. (METRES)			149.132		169.782		263.313				38.970	
sea level SL.DIST. (+/-)			149.107		169.767							
HORIZ. DIST.			149.107		169.768		263.295				35.165	
ΔE			- 2.728		+ 2.146		+ 3.081				-16.795	
DPD-GEO-6			- 2.898		+ 2.079		+ 3.082				-16.868	

HORIZONTAL DIRECTION NOTES						DATE OF SURVEY 04/10/78		FILE Karnak / VotK. traverse				
CHARGE UNIT—EXPEND. AUTH.		CO.		RTE.		PM		WEATHER Warm - Clear		PAGE OF 20		
PARTY CHIEF GOODMAN		RECORDER SMITH				INSTRUMENTMAN LIGHTBODY						
OCCUPIED STATION VK 2 (Knob)				REMARKS Berkeley Theban Mapping Project						THEO. MODEL & NO. T-2		
OBSERVED STA.			DEG.	MIN.	SEC.	AVE. SEC.	MEAN D & R	DIRECT. SEC.	DIRECTION			REMARKS
									DEG.	MIN.	SEC.	
VK 1	D		00	00	03	04	03.5					R.O.
	R		180	00	03	01	02.0	02.7	00.0	000	00	
15	D		263	30	21	23	22.0					# 15
	R		83	30	26	25	25.5	23.7	21.0	263	30	
VK 1	D		45	02	33	34	33.5					
	R		225	02	30	30	30.0	31.7	00.0			
15	D		303	32	50	49	49.5					
	R		128	32	54	54	54.0	51.7	20.0			
VK 1	D		90	05	01	02	01.5					
	R		270	05	00	00	00.0	00.7	00.0			
15	D		353	35	21	21	21.0					
	R		173	35	22	21	21.5	21.2	20.5			
VK 1	D		135	07	26	27	26.5					
	R		315	07	25	25	25.0	25.7	00.0			
15	D		38	37	45	45	45.0					
	R		218	37	47	47	47.0	46.0	20.3			
	D						.					
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# COMPUTER SYSTEMS

## THREE WIRE LEVELS

ADDRESS		C/T	SOURCE		CHARGE		EXPENDITURE AUTHORIZATION		SPECIAL DESIGNATION (USE WHEN APPLICABLE)	
DISTRICT	GROUP		DIST.	UNIT	DIST.	UNIT	GEN. LED.	SUB-ACCT.	BRIDGE NUMBERS	PARCEL OR CONTR. NO.
PROBLEM										
JOB DESCRIPTION										
BERKELEY, THEBAN, MAPPING, PROJECT. S/C 2215										
C/T	LEVEL DATUM	PARTY CHIEF	RECORDER	ROD NO.	TYPE OF ROD					
J		GOODMAN	LIGHTBODY		<input checked="" type="checkbox"/> METE <input type="checkbox"/> HARD <input type="checkbox"/> STADIA FACTOR 1:100 <input type="checkbox"/> 3:100 <input type="checkbox"/> 1 3 S/C 2216 RECALL ELEVATION STORE					
LINE NO.	POINT DESCRIPTION	BACKSIGHT	FIELD CHECK	FORESIGHT	FIELD CHECK					
T.P.#1, 2, 7, Fd. prom. rock	216, 2, 3	0.080	0.132	0.132	0.132					
In PCC base of 8d. pst. on left near beginning of sharp curve to right.	215, 3, 5	0.087	0.132	0.132	0.132					
	214, 4, 8	37.172	0.132	0.132	0.132					
T.P.#1, 2, 8, TRAV. PT. "15C"	311, 2, 5	0.097	0.084	0.084	0.084					
1.25 m off edge pms. opp. 2nd 8d. pst. on left.	310, 2, 8	0.096	0.084	0.084	0.084					
	219, 3, 2	37.365	0.084	0.084	0.084					
T.P.#1, 2, 9, Fd. prom. rock	214, 7, 0	0.057	0.055	0.055	0.055					
In PCC base at EC of sharp curve to right.	214, 1, 3	0.056	0.055	0.055	0.055					
	213, 5, 7	37.478	0.055	0.055	0.055					
T.P.#1, 3, 0, Set, PKN in right edge of PMS at guard post on right & 20 m	211, 9, 0	0.036	0.089	0.089	0.089					
	211, 5, 4	0.036	0.089	0.089	0.089					
	211, 1, 8	37.550	0.089	0.089	0.089					
T.P.#1, 3, 1, TRAV. PT. "AO"	119, 9, 3	0.047	0.092	0.092	0.092					
Fd. Br. Dsk. in PCC 0.5 m rt. of edge PMS & 1 m uphill from PP.	119, 4, 6	0.047	0.092	0.092	0.092					
	118, 9, 9	37.644	0.092	0.092	0.092					
T.P.#1, 3, 2, Fd. prom. rock	211, 7, 3	0.078	0.147	0.147	0.147					
In PCC base of 1st. PP above TRAV. pt. "AO"	210, 9, 5	0.077	0.147	0.147	0.147					
	210, 1, 8	37.799	0.147	0.147	0.147					
T.P.#1, 3, 3, Fd. prom. rock	214, 4, 2	0.103	0.149	0.149	0.149					
In PCC base of 2nd PP above TRAV. pt. "AO"	213, 3, 9	0.101	0.147	0.147	0.147					
	212, 3, 8	38.003	0.147	0.147	0.147					
T.P.#1, 3, 4, Set galv. nail	210, 7, 4	0.032	0.122	0.122	0.122					
In edge P.M.S. @ PP opp. turn-out at left to first tombs.	210, 4, 2	0.031	0.121	0.121	0.121					
	210, 1, 1	38.066	0.121	0.121	0.121					
T.P.#1, 3, 5, TRAV. PT. "A", Fd.	217, 4, 5	0.090	0.024	0.024	0.024					
Br. Dsk. in PCC in left edge of PMS @ downhill side to turnout to tombs on left	216, 5, 5	0.090	0.024	0.024	0.024					
	215, 6, 5	38.246	0.024	0.024	0.024					
T.P.#1, 3, 6, Set, PKN in rt. edge PMS at PP opp. PCC loading dock in parking area	219, 2, 2	0.103	0.101	0.101	0.101					
	218, 1, 9	0.104	0.101	0.101	0.101					
	217, 1, 5	38.453	0.101	0.101	0.101					

IN CASE OF QUESTION CONTACT: S/C 2217

BY \_\_\_\_\_ CKD \_\_\_\_\_ DATE \_\_\_\_\_

NAME \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 4/25/78

VERIFY \_\_\_\_\_ SHEET NO. 1.3 OF \_\_\_\_\_

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

SURVEY	NOTES	PARTY CHIEF	RECORDER	mapping	Tomb # 3
CHARGE UNIT - EXPEND. AUTH.	REMARKS, TAPE DATA, LEVEL NO., EDM/THEO. MODEL & NO., ETC.	Goodman	Goodman	LIGHTBODY, SMITH	11sted topo
Berkeley Map of the Theban Necropolis.		TWAROWSKI			

STATION	LEFT	RIGHT	ELEVATIONS	DESCRIPTIONS
20 + 23.27	1.00	2.03		Column right, end
20 + 22.18	0.98	2.02		Column right, begin
20 + 23.27	1.50			Column left, end
20 + 22.18	1.48			Column left, begin
20 + 20.59	1.33	1.77	-1.65	End gate; begin chamber with 4 columns
20 + 19.54	1.63	1.09	-1.60	Begin gate; end wall
20 + 17.81	1.63	1.10	-1.60	Entrance to room #1 on rt. (see pg. 4)
20 + 17.68				Unfinished niche on left (see pg. 4)
20 + 11.678				back to top 2.5m pipe = 88.3310 slope dist. = 11.680
20 + 09.82				End overhang at E
20 + 09.50		0.86		Begin gate jamb @ rt.
20 + 09.50		1.17	-1.22	Begin gate @ rt. @ wall return
20 + 09.20	1.27			Begin gate jamb @ left
20 + 09.20	1.59			Begin gate @ left @ wall return
20 + 08.05			+1.85	Begin overhang at E
20 + 04.40		1.08		Begin main wall rt.
20 + 04.42	1.6		Level ±	Begin main wall left
20 + 02.60		1.16	Level ±	Begin rubble wall rt.
20 + 02.22	1.565		Level ±	Begin rubble wall left
HI = 0.862 + 0.300; zenith = 99° 53' 48"				
T @ 2.5m pipe @ Station 10 + 18.15 "3-tomb Control line"				
CHECKED	DATE	CO.	DATE OF SURVEY	PAGE
			5/11/78	3
				FILE
				V. of K. tomb mapping
				tomb #3



The technical aspects of the Berkeley Map have been to some extent governed by the standards of the Cartographic Branch, Topographic Division, United States Geological Survey. These standards are briefly set forth in various publications of the USGS and in the Manuel Tecnico de Convenciones Topograficas (1969). In future, and to the extent that the peculiarities posed by an archaeological map at the unusually large scale of 1:500 will permit, the Berkeley Map will adhere to these standards in terms of color, type styles, symbols, and design. The purpose of such adherence is to insure that the map will be as clear to its users as possible. The selection of USGS rules in lieu of some other standard is made not only for convenience but because they have become a widely accepted cartographic standard not dissimilar from those used elsewhere. Currently, we are investigating the possible use of orthographic maps as an alternative design form for the Berkeley series. If used, these, too, would adhere to USGS standards.

Each sheet of the Berkeley Map will contain a legend in which the symbols for that map sheet (and only that map sheet) are explained. A complete legend will appear on a supplemental sheet to be issued with each volume of the final Atlas.

In future, all printed material published on or with the Berkeley Map will appear in both English and Arabic. The problems posed by toponymy, ancient and modern, of the Theban Necropolis will be dealt with in the next annual report. The selection of names will be documented in supplementary material, and alternative names and spellings will appear in the concordance and index of the Atlas. For convenience, Egyptian personal names will, when possible, follow Porter-Moss. The transliteration of modern names will follow modern cartographic practice.

In order to make the Berkeley Map available as soon as possible, it is intended to issue it in sections of approximately 35 map sheets each. Each section will be complete in itself, except for the concordances and indices, which will appear in the final section. A supplemental sheet, published with each section, will provide an abbreviated guide to use and will give an index of tomb numbers and owner's names. The approximate areas to be covered by each section, listed in their anticipated order of publication, are:

1. Valley of the Kings, West Valley, intervening areas and gebel to the north and northeast. (This will include Survey of Egypt map squares C-3).

2. Dira Abu Naga and adjacent areas (including C-6, C-7, D-6 and D-7).

3. Valley of the Queens, gebel between KV and QV and adjacent areas (including map squares E-1, E-2, and D-3).

4. Deir el-Bahari, Asasif, Khoka, Sheikh Abdel Qurna (including C-4, C-5, D-4 and D-5).

5. Qurnet Murai, Deir el-Medineh, Ramesseum, and adjacent areas (including E-3, E-4, E-5, F-3 and F-4).

6. Medinet Habu and areas south (including F-1, F-2, and G-3).

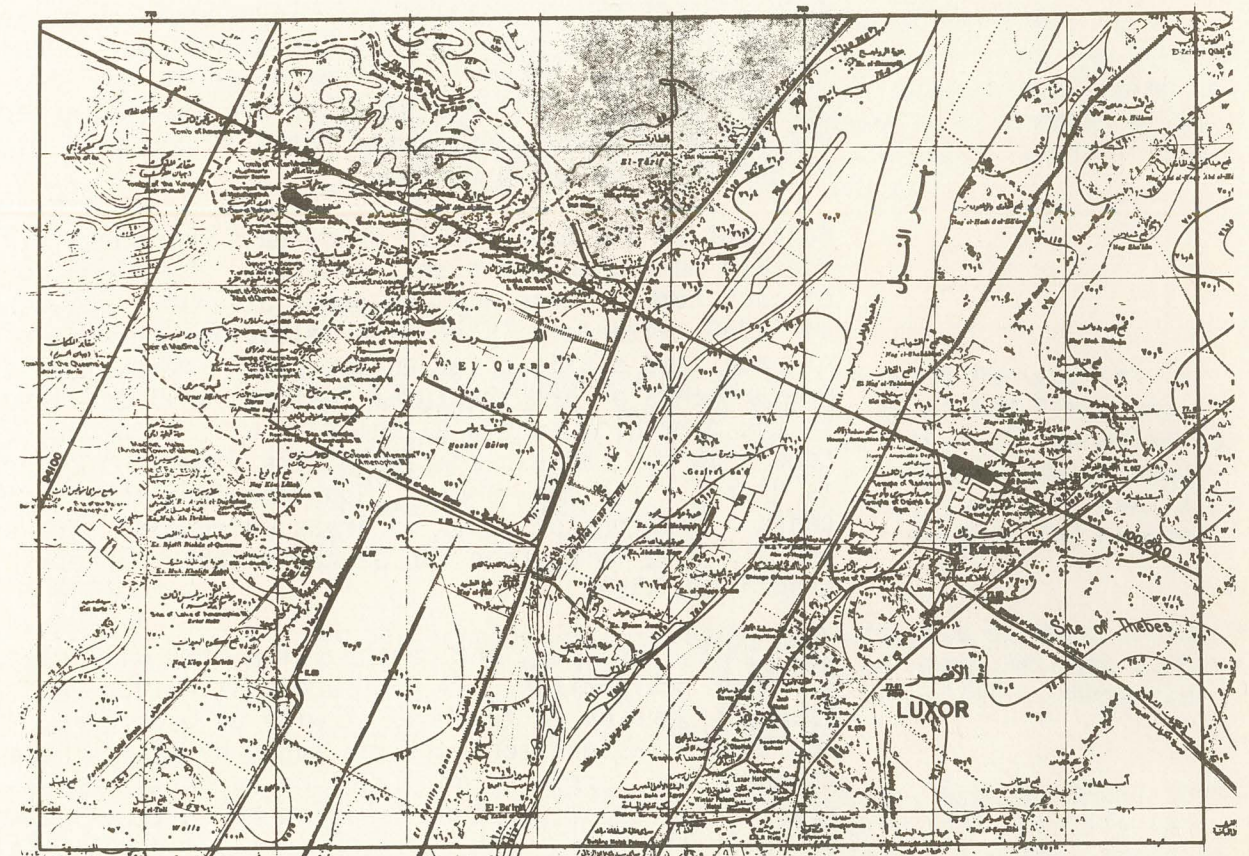
7. Areas north of Dira Abu Naga and the Seti Temple (including D-7 and C-7).

It is estimated that approximately 230 map sheets will be needed to cover the entire Necropolis.

Each map sheet will include from one to six grid squares, drawn topographically at a scale of 1:250 and published at 1:500. Each grid square will cover an area 100 x 100 metres. The number of grid squares included on any one sheet will depend upon the amount of archaeological material they contain. Since we plan that more detailed tomb plans, drawn at 1:100 and published at 1:250 will appear on the same map sheet as the grid square in which they occur, a single grid square containing many tombs might occupy a single map sheet. In other cases, four or six grid squares might be fitted onto a single sheet. A key at the bottom of each sheet, together with master keys in each Atlas section, will indicate clearly on which sheet each grid square or cluster of grid squares can be found. The accompanying sketch of the Valley of the Kings grid shows how the grid squares will be distributed among the several Valley of the Kings map sheets.



The N 100,000.00 grid baseline is shown in position on the West Bank. Note that this line, the Karnak Temple main axis line, lies north of Deir el-Bahari and is nearly, but not exactly, parallel to the axis of Deir el-Bahari.





Each grid square will be drawn with 1-metre contour intervals, every 5th line accented. Elevations will be given in metres above sea level, as described in the preceding Survey notes. All hypsographic features--natural, ancient, and modern--of any size or possible significance will be included. Where necessary, they will be labelled or identified by symbols. Spot elevations will be given at appropriate points, and the location of all survey markers, old and new, will be noted. Their exact position and elevation will be noted in detail in the supplemental sheet accompanying each Atlas section.

A survey monument will be placed at the entrance to each tomb and its exact location and elevation will be noted on the 1:250 tomb plans and in the dimension schedules. All subterranean features will be noted on the topographic map to facilitate study of how an area's terrain and the previously-constructed tombs it contains might affect later building design.

Adjacent to the topographic grid, each map sheet will contain more detailed plans, sections, and elevations of each tomb. These will be drawn at 1:100, published at 1:250, with details of floor elevation and the bearing of each tomb's axis given on the plan. More precise measurements of architectural features will be noted in the dimension schedule that also will accompany each tomb drawing. An explanation of the dimension schedule is given on the map sheet. (Supplementary sheets will contain drawings of tombs in areas where grid squares contain more tombs than can be comfortably placed on a single map sheet).

Each gate, corridor, and chamber of a tomb will receive a letter designation. If any such designation has already been assigned by Porter-Moss it will be used here. Additional designations will be added by us to those chambers and corridors not labelled by Porter-Moss. To distinguish these, letters assigned by Porter-Moss will be in italic type. Their presence will indicate that the chamber or corridor thus identified is discussed in Porter-Moss and therefore presumably is decorated.

The tomb numbers used will follow Porter-Moss, and their attribution to named individuals also will follow their notes except in rare instances where a more recent--and certain--attribution has been made. Unnumbered tombs will be referred to by their precise grid reference number. For example, a tomb indexed as N 94557.38 / 92333.45 E is one whose entrance lies at these coordinates (approximately 5400 metres south and 7700 metres west of the Karnak 100,000.00 point). The method used to survey tomb interiors, which utilizes an optically positioned baseline, will be discussed in detail in next season's annual report.

In areas of the Necropolis where concessions to publish are held by other expeditions, we hope to be able to make use of the plans prepared by those expeditions, giving full credit on the map sheets to their source. Where such maps are not available, we hope to offer to prepare such maps for the concession-holder, giving them full control over the use of those maps in exchange for permission to include them in the Berkeley Map. We already have discussed these plans with several concession-holders at Thebes and anticipate no difficulty in producing a complete map of the Necropolis.

We already have described the sequence of the Berkeley Map publication. That sequence refers to the full-size, 'library' format of which the enclosed map sheet is a tentative sample. In addition, to insure that the Berkeley Map is as useful as possible, we anticipate publishing the map sheets in a spiral-bound, reduced-size format, a two- or three-volume 'field edition', printed on special long-wearing paper at 11 x 14" (28 x 35 cm.).

#### FUTURE PLANS

During the second season of the Berkeley Map project, we shall complete our work in the Valley of the Kings and adjacent areas and will prepare section I of the Atlas for publication. We anticipate that a complete set of newly-run aerial photographs of the Necropolis will be available to us, and the topographic data will be compiled before the start of the third season.

We are greatly encouraged by the progress of work during the first season at Thebes and by the cooperation that we have received from colleagues and, most especially, from the Egyptian Antiquities Organization.

Accuracy, archaeological completeness, and aesthetic considerations are attributes that we believe fully justify the production of the Berkeley Map. The real significance of the project, however, lies in the fact that such a map is of the greatest importance to future archaeological work in the Theban Necropolis. Indeed, such a map is becoming increasingly vital to the future of the Necropolis itself.

We would greatly appreciate any comments on the format or content of the Berkeley Map. All correspondence should be addressed to:

Kent R. Weeks  
Dept of Near Eastern Studies  
University of California  
Berkeley, California 94720 USA.









## DIMENSION SCHEDULES FOR TOMBS ON THIS MAP SHEET

Tomb 55, which extends beneath tomb 6, will be scheduled on sheet 8. The exact position of tomb 5 is uncertain: it lies either in grid square 99700/94100 or 99700/94000. Its approximate position will be marked on sheet 6.

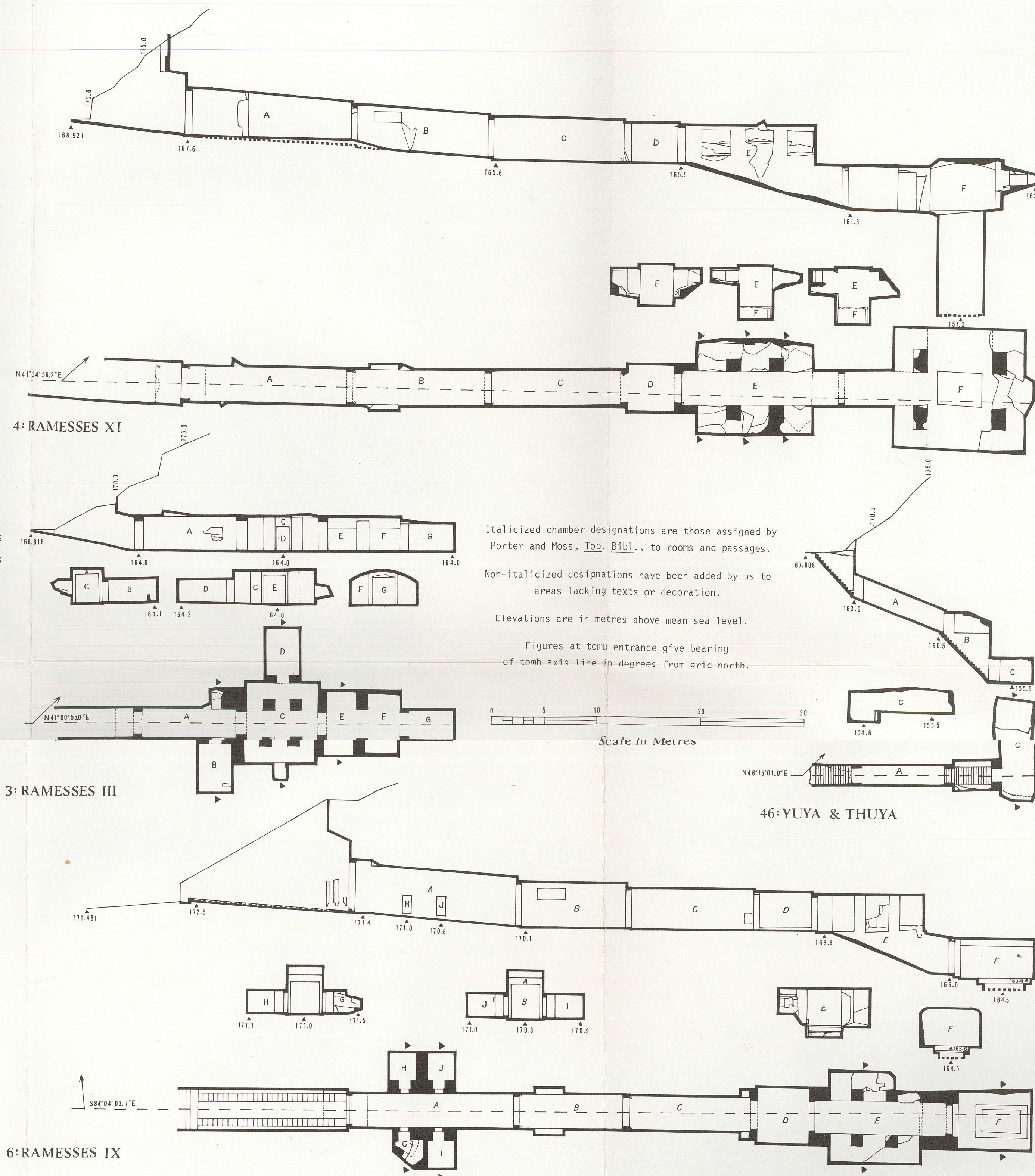
All measurements are in metres. In corridors and chambers where several measurements could be taken, the figure given represents the mean of those measurements, plus or minus the greatest deviation from that mean. Length is measured along chamber midline. Dimensions in parentheses were not verified by field review.

**TOMB 3** Grid coordinates of entrance:  
N: 99695.0052 / E: 94136.4244  
Total tomb length: 30.43  
GATE A: L: (0.75); W: 2.13; H: 2.61; CORRIDOR A: L: (8.87); W: 2.725±0.005; H: 3.097±0.057; GATE A-B: L: 0.61; W: 1.16; H: 2.02; CHAMBER B: L: 4.65; W: 3.125±0.005; H: 2.10±0.03; GATE A-C: L: 1.05; W: 2.12; H: 2.78; CHAMBER C: L: 6.81; W: 7.695±0.005; H: 3.125±0.005; GATE C-D: L: 0.69; W: 1.20; H: 2.09; CHAMBER D: L: 4.57; W: 3.135; H: 3.03±0.06; GATE D-E: L: 0.81; W: 2.10; H: 2.76; CHAMBER E: L: 2.91; W: 6.15±0.02; H: 3.04±0.02; GATE E-F: L: 1.10; W: 2.63; H: 2.76; CHAMBER F: L: 3.03; W: 5.81±0.07; H: 3.115±0.015; GATE F-G: L: 0.85; W: 2.11; H: 2.56; CHAMBER G: L: 4.25; W: 2.715±0.055; H: 2.56±0.

**TOMB 4** Grid coordinates of entrance:  
N: 99677.3408 / E: 94170.8094  
Total tomb length: 81.83  
GATE A: L: 0.63; W: 2.86; H: 3.94; CORRIDOR A: L: 15.21; W: 3.295±0.02; H: 3.91±0.565; GATE A-B: L: 0.655; W: 2.93; H: 3.095; CORRIDOR B: L: 12.56; W: 3.23±0.005; H: 3.945±0.025; GATE B-C: L: 0.62; W: 2.79; H: 2.79; CORRIDOR C: L: 12.48; W: 3.19±0.03; H: 3.93±0.08; GATE C-D: L: 0.75; W: 2.185; H: 3.645; CHAMBER D: L: 2.45; W: 4.425±0.07; H: 3.685±0.018; GATE D-E: L: 0.64; W: 2.75; H: 3.38; CHAMBER E: L: 15.09; W and H: irregular; GATE E-F: L: 0.60; W: 2.72; H: 3.87; CHAMBER F: L: 18.14; W: 11.23±0.15; H: irregular.

**TOMB 6** Grid coordinates of entrance:  
N: 99614.4047 / E: 94075.48702  
Total tomb length: 65.07  
GATE A: L: 0.59; W: 2.78; H: 4.42; CORRIDOR A: L: 15.33; W: 3.225±0.01; H: 4.467±0.018; GATE A-B: L: 0.57; W: 2.76; H: 3.81; CORRIDOR B: L: 9.95; W: 3.217±0.007; H: 4.112±0.013; GATE B-C: L: 0.60; W: 2.765; H: 3.485; CORRIDOR C: L: 11.52; W: 3.197±0.043; H: 3.695±0.02; GATE C-D: L: 0.59; W: 2.765; H: 3.52; CHAMBER D: L: 4.91; W: 5.25±0.01; H: 3.582±0.017; GATE D-E: L: 0.59; W: 2.775; H: 3.135; CHAMBER E: irregular; GATE E-F: L: 0.61; W: 2.76; H: 3.06; CHAMBER F: L: 7.36; W: 5.315±0.075; H: irregular; GATE A-G: L: irregular; W: 0.85; H: 1.86; CHAMBER G: irregular; GATE A-H: L: (1.30); W: 0.855; H: 1.845; CHAMBER H: L: (2.50); W: 2.605±0.03; H: 2.068±0.018; GATE A-I: L: (1.20); W: 0.82; H: 1.88; CHAMBER I: L: (2.60); W: 2.62±0.005; H: 2.102±0.023; GATE A-J: L: (1.25); W: 0.86; H: 1.85; CHAMBER J: L: (2.50); W: 2.595±0.005; H: 2.135±0.

**TOMB 46** Grid coordinates of entrance:  
N: 99686.4580 / E: 94153.0624  
Total tomb length: 17.215  
GATE A: L: 1.00; W: 1.37; H: 2.05; CORRIDOR A: L: 7.755; W: 1.765±0.01; H: 2.053±0.007; GATE A-B: L: 1.00; W: 1.33; H: 1.85; CORRIDOR B: L: 3.32; W: 1.665±0.035; H: irregular; GATE B-C: L: 1.04; W: 1.22; H: (2.05); CHAMBER C: L: 3.10; W: 9.79±0.22; H: 2.061±0.119 (at front).



Italicized chamber designations are those assigned by Porter and Moss, *Top. Bibl.*, to rooms and passages.

Non-italicized designations have been added by us to areas lacking texts or decoration.

Elevations are in metres above mean sea level.

Figures at tomb entrance give bearing of tomb axis line in degrees from grid north.

## 6: RAMESSES IX

A Project of the  
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THE BERKELEY MAP  
OF THE  
THEBAN NECROPOLIS  
1: THE VALLEY OF THE KINGS  
INCLUDING TOMBS 3, 4, 6, & 46

SAMPLE



THE EXCAVATION OF MAKHĀZIN MAṢR

Chris Eccel  
University of Chicago  
ARCE Fellow, 1977-78

As the title implies, I intend to treat the quest for old books and other documents as an information-gathering methodology. Those who have found that the in-print materials of the bookstores in Roger Allen's list (ARCE Newsletter, Nos. 97/98, p. 20) do not suffice for their research needs may feel up to shedding their town duds, doffing something reasonably spider-proof and dirt resistant, and digging in. Initially, I will describe the major locations and then discuss the enterprise.

For Arabic materials, perhaps the most convenient place is Maktabat at-Tawḥīd owned by Shaykh 'Alī Ibrāhīm Kharbūsh. One proceeds from AUC up Shaykh Rihān Street, past 'Ābdīn Palace to Port Sa'īd Street. There one turns right (south), passes the first side street on the right, and enters the second (west), which is actually an alley ('Aṭfat al-Anṣārī). This is blocked by Maqām Ibrāhīm aṣ-Ṣā'im al-Anṣārī, and when standing facing it (west) Shaykh 'Alī's is directly at one's left hand. Usually one will find his son Ibrahim, who has a fair knowledge of old books and of what he has. The books are mostly arranged, in a rough subject order, on shelves. Don't overlook the rooms in the back, nor the loft. Here there is very little in European languages.

Muḥammad Ṣādiq is, in my opinion, the most important general resource. Maktabat Ṣādiq is at 317 Port Sa'īd Street, approximately across the street from Shaykh 'Alī. This shop is usually run by his son Muṣṭafā. In the front part of the store one finds Arabic and European books on shelves by subject. The back room is covered with heaps and heaps of books. It is worth noting that he has many old Hebrew books, plus a daughter with an M.A. in Hebrew. His second location is on the first balcony of 'Imārat al-Markaz at-Tigārī on the square in front of Sayyidna Ḥusayn mosque (on top of the old Fishāwī's). The man there is not the person to buy from if you can help it. Find Muḥammad Ṣādiq or Muṣṭafā. The books are stacked together in no order.

The serious searcher will be interested in Ṣādiq's makhāzin. He has a large shed by his house near 'Ābdīn, another near Bāb al-Mitwallī, another in Al-Fahhāmīn, and yet another at Mīdān al-Gaysh. These sheds contain unordered heaps and are covered with dust and insects. All must be opened by special request.



A small but useful shop is that of Aḥmad Maḥmūd Khalīl and Maktabat al-Khalīl may be visited after Maktabat Ṣādiq by continuing south on Port Sa'id Street and slivering off to the left (east) into Darb al-Gamāmīz St. of the Sayyida Zaynab district (l 'Aṭfat an-Nidī). He and Muhammad Ṣādiq also occasionally have manuscripts and some Egyptological materials. Another important source is Maktabat aṭ-Ṭayyib in Ḥarat Abū Sayf, behind the 'Omar Effendi south of Mīdān al-'Ataba, across from Maḥmūd as-Sammāk restaurant. His books are mostly Arabic and a few blocks from his shop there is a large apartment that he uses as a makhzan.

While in the Azhar area stop at the maktaba of Muḥammad 'Alī Ṣubayh right on Mīdān al-Azhar, south side. He has an adjoining makhzan. And across Azhar St. at the top of the narrow street parallel and adjacent to it, you will find Maktabat al-Kulliyāt al-Azharīya, which also has a makhzan and a fair number of important books ('Aṭfat al-Bōstā). Both of these have almost exclusively Arabic books.

Not to be overlooked is Maktabat al-'Arab, 28 Al-Faggala St., near Ramses Station. There the books are arranged roughly by subject. The owners are also in the book export business under the name of Saladin Boustany Publisher, 23 Kāmil Sidkī St., Faggāla.

In Alexandria, perhaps the most rewarding shop is Maktabat George Stavros, 19 Sīdī l-Mitwallī St. Here one finds mostly European books, but some Arabic. They are quite numerous and ordered by language. Leaving this shop, turn right and proceed to Masgid al-'Attārīn St., into which one turns (right again). After about a block one finds on the left a small shop that was described to me as Maktabat as-Shaykh, but it bears a worn sign that reads something like the Friends of Books. The shop has mostly European books and is small (do not overlook the backroom and small loft), but down the street the proprietor has a large apartment that he uses as a makhzan. A third Alexandrian source is the Antiquarian Bookshop, 27 Salīm Qabūdān (in the same part of town).

The above-listed shops and their attendant makhāzin all specialized in old books. Some other shops do have old books, such as several of those which Professor Allen listed on Gumhūriya St. Les Livres de France has a nice collection but, at higher prices, though generally fair by European standards. Millionaires and the desperate may find very nice and useful items at L'Orientaliste, at completely ridiculous prices. Egyptians will send you to the stands on the north side of Mīdān Ōbara because this is where they find their own used reading. Most of these materials are popular and quite useless, unless this is the subject of one's study. Occasionally, important items are found there though, if an offer is made to get something for you, most probably the offeror will seek it from one of the abovementioned makhāzin.

Probably most readers will not be interested in actual excavation, but rather in acquiring a few specific items. Most of the above people have no idea what they have and, since the books are minimally ordered if at all, it is difficult to find just what one wants without considerable time investment. I suggest that early in one's research a list be made and photocopied for distribution. These people do have a lot of books passing before them, and they will keep an eye open to make a sale. But the less hunting you do, and the more they do, the higher the price. I consider it a moral duty to bargain the prices down to within reason, a notion of which should be obtained from persons buying regularly. If one can arrange to pass by regularly on one's way, to browse and chat, one will be less probably treated as a tourist. Actually, the best solution for those who do not wish to search but need very specific items, and who are not bothered by higher prices, is to contact a specialist in hunting, Sa'd az-Zinārī at Maktabat Sa'd wa-Shurakāhu, 176 Al-Qal'a St. near Mīdān al-'Ataba. Armchair excavators may also get their searching done for them by summoning Sa'd by calling 932544. Sa'd makes housecalls.

The specialist in premodern Egypt learns of his sources in bibliographies, bibliographical studies, manuscript catalogues and course lectures. From such sources as these the modernist can hardly scratch the surface. The sorry state of affairs is reflected by the fact that name-dropping 'Alī Mubārak, Amīn Sāmī, and 'Abd ar-Raḥmān al-Gabartī already identifies one as an initiate. The great scandal is that in the United States Al-Waqā'i al-Maṣriya, perhaps the most important general source of all, is all but nonexistent, in spite of the fact that in the 1830's Muḥammad 'Alī ordered that every government office be specifically defined (described) in law, with the result that Egypt at this early date became one of the few countries with the formal administrative structure documented in detail. Worse, the two legal compendia of Fīlīb Gallād (only six volumes each) are unavailable for the most part, apart from private collections. To be sure, the mountain of documentation that exists cannot be seriously studied without a mastery of Arabic far beyond the kataba-yaktubu state. But even those who can read with sufficient speed face the problem of having no way of learning of sources that unfortunately would be unavailable even if they knew of them.

Due to the Library of Congress' late start in systematically collecting Arabic publications, virtually hundreds of important sources are unavailable in the States, requiring the serious researcher to acquire his own when possible. But excavation goes a step further, to the discovery of sources not found in bibliographies and unknown to us. These sources often include privately published documents and tracts, and even wet-copied handwritten lectures. To discover these it is useful to discuss one's research with the above dealers and to interest them in it, making them research assistants paid from their sales profits. Often they have called my attention to papers of government offices for internal use, reports, and lectures that I might otherwise have missed. But ultimately it is necessary to spend hundreds of hours in the shops and makhāzin, systematically



going through shelf after shelf or, more usually, working one's way through heaps eight feet high and as much deep, covered with thick dust and infested with insects. I usually work with an assistant of the dealer to whom I hand volumes as fast as he can take them, to get through the thousands of uninteresting items and locate the occasional find.

Since many of these finds are falling apart, binding is often required to preserve the items. Missing pages may often be xeroxed from library copies and bound in. The best binder is Sa'd Maḥmūd 'Abd ar-Raḥmān Khidr, 2 Zuqāq al-Kalwatī bi-l-Gūdriya l-Kabīra, Darb Si'āda, 'Imārat al-'Isawī. He is more expensive than some like and so sought-after that it is very difficult for him to work in additional customers. A very good binding can be had from Hasan 'Abd al-Muḥsin, Dār at-Taḡlīd al-Fākhīr, 7 Al-Mabdūlī St., just off Shaykh Rīḥān St., south of 'Abdīn Palace. A solid binding can be had more cheaply from Al-Mugallīd al-'Arabī on Azhar St., across from the university.

And finally, we should peruse each other's collections for, most probably, there will not be occasion to list all of our acquisitions in our published bibliographies.

مرکز البحوث الإسلامية بمصر



